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THE EXAMINATION OF PATIENTS.

A Clinical Lecture Delivered at the Medico-Chirurgical College of Philadelphia,

BY PROF. H. ENGEL, M. D.

As there is, accidentally, no new case on hand that would permit me practically to demonstrate some of those nervous diseases, of which I have thus far given you a theoretical description in my didactic lectures, I shall endeavor to train you in the examination of patients. As consulting physician, I have often had the opportunity to make the following observation: A young doctor is called to attend a patient, but notwithstanding his best efforts, he does not succeed in recognizing the nature of the malady, from which the sick individual is suffering. He ultimately asks, perhaps, his former preceptor to see the case with him, and, to his surprise, while his teacher is questioning the patient, everything appears clear to him, the veil seems to be lifted from his eyes, and he correctly diagnosticates the disease, before the consultant has concluded the investigation and pronounced his opinion. Again, let two physicians, equally expert, together consult at the bedside of a sufferer, and let the one be the attending, the other the consulting physician, the nature of the case being so complicated as to make an exchange of opinion desirable. Certainly the attending doctor, who has, probably, visited the patient several times previously, may be supposed to know more about the case than his colleague, who sees the sick individual for the first time. The consultant commences his examination; from a few questions, the attending physician at once recognizes that his confrère is on a wrong scent, and to save him unnecessary labor, by a remark or two he guides his colleague's view of the case into a totally different channel, which, as one single question may announce to the attending doctor, again is a mistaken one, and which is once more corrected in a similar manner, until, finally, the examination reaches the point where the superior skill of the one or the other will decide the doubtful diagnosis.

In the first case cited, the young physician recognizes in the series of questions which his teacher puts to the patient a familiar picture of a disease known to him, while in the second case the attending physician had previously followed the same wrong paths, that he observes his colleague to take. To enable you to examine a patient in such a manner, as at once to permit the listener, if an expert, to guess the disease whose existence you wish to establish, or in other words, to know how to diagnosticate a disease with the least possible waste of time and with the greatest certainty, you ought to be trained. Though it must always be based upon accurate scientific knowledge, the diagnosticating of disease really is an art. To master it, you must practice it after you have been taught how; you must perfect your senses for the same end, and ought to possess some talent. What is called intuitively recognizing a disease is nothing else but the most perfect art developed in a natural talent; the mind reasons in such a case with a rapidity as to make its possessor unconscious of it, while his art enables him to jump, as it were, at a conclusion,

though, in fact, the same stages are gone through, but so quickly as to appear omitted. Even the most expert, however, if wise, will never rely upon such a diagnosis; he will apply the necessary tests to obtain the scientific proof.

You will have frequently observed, that after a question or two, sometimes by only looking at a patient, I recognized his disease. This intuitive knowledge I cannot communicate to you; you have to acquire it. But I can teach you the way to obtain it, and that is done by training. When you have practiced a certain manner of examining patients in hundreds or thousands of cases, you will gradually reach the zenith of the art, and become an accomplished diagnostician. But if you follow at the bedside in each case a different plan, a varying mode of procedure to arrive at a diagnosis, if you adopt no special method, you will obtain no result from your experience. Neither will you be successful if you should only rely on your art alone, without taking care to possess the necessary scientific knowledge. Indeed, your theoretical instruction regarding the etiology, pathology, diagnosis, and differential diagnosis of diseases should be complete in every respect, ere you commence to adopt a method of examining patients, and ere you try to perfect yourselves in the same. With this proviso I shall commence your training.

As it may be better at once to give you a practical demonstration of what I am about to teach you, and as it would be important for such a purpose to use for illustration one and the same case, let me ask you whether one of you gentlemen would be willing to serve as a clinical patient? Should there be one amongst you who is suffering from a pathological condition, he would be the more welcome.

(I. S., a member of the senior class, here rose, pronounced himself to be ailing from a morbid condition, and expressed his willingness to serve as clinical patient. At the request of the lecturer he stepped into the arena and took the usual seat of patients.)

Gentlemen, as Mr. S. has kindly volunteered to assist me in my efforts, I shall try practically to demonstrate on him what I have to say to you. He admits that he is suffering from a disease, of which I have no idea of what it may be. I must confess that the general impression which he makes upon me as diagnostician, teaches me nothing. I am, therefore, utterly unable to tell you beforehand whether he really is a patient, and what his disease. I am glad of this fact, as it will give me a still better opportunity to examine him strictly secundum lege artis, according to the law of the art.

The method which I shall adopt is one, with few alterations, pursued by all clinicians. Follow my advice, gentlemen, to examine every patient in exactly the same manner. Once more I repeat that such a procedure alone can make you accomplished diagnosticians.

As a general rule, when a patient enters your office, or when you visit him for the first time, at once study his face, his manner of walking, his mode of breathing, and everything that the eye can teach you. The flushed face of fever, the pale countenance of anæmia, the cachectic complexion of cancer, phthisis, morbus Brightii, heart disease, etc., the imbecile look of the idiot, the anxious expression of the drunkard laboring under the hallucinations of delirium tremens, the apathy visible in softening of the brain or in stupor, the Hippocratic face as the forerunner of death—all these and many others, too numerous to mention, will at once guide your thoughts in a certain direction, and cause you to concentrate your diagnostic efforts. Thus the existence of paresis or paralysis, and other motor disturbances, as observed when the patient moves about, the presence of affections of the respiratory organs, as evinced by the patient's breathing, and many other useful informations, all obtained from our inspection of the patient, ere we even accost him, may be gained in the manner indicated.

A patient is generally excited when confronted the first time with his physician. It is of great importance to allay this fear and anxiety, and we best reach this object by permitting him to talk of the affairs concerning others; but that we may obtain at the same time knowledge, which may aid us in the recognition of his disease, we usually begin with the family history. From it we learn the existence or non-existence of hereditary disease—whether cancer, tuberculosis, scrofula, nervous diseases, or any other ailment be hereditary in the family. The information thus gained is not only of value in a diagnostic point of view, but also regarding prognosis. For instance, a patient having been attacked by pneumonia comes to us with a part of the lung consolidated. The complete absence of tuberculosis in his family gives us strong hope of curing the lung disease by causing absorption of the inflammatory products, which induced the solidification of the pulmonary parenchyma, while the presence of a hereditary tubercular taint foretells the earlier or later breaking-down of the diseased tissue, the deposit of tubercles, if they are not already un-

dermining the consolidated lung, and the fatal issue of the case.

It would lead me too far to enumerate to you all the points that the family history may give us. The detailed study of the etiology of every disease will make you acquainted with them. I shall now make a practical application of what I told you, in the case of our friend S. As I have already explained to you, the mere inspection of him teaches me nothing, except perhaps, that the slightly bluish tint of his face denotes some circulatory disturbance. The fact of his wearing spectacles somewhat obscures the view. I cannot read the exact expression of his eyes, and it may be that I thus lose some information which I might have obtained otherwise.

"Is your father living, and if so, does he enjoy a good health?"

"Yes sir, he is a healthy man, and only occasionally complains of rheumatic pains, he having suffered once or twice from acute rheumatism."

Gentlemen, from this reply we learn only, that rheumatism seems to be in the patient's family. Rheumatism, I mean acute articular, is apt to give rise to heart disease. This, if present in the patient, is sometimes inherited by the offspring, but not necessarily. For the time being we store this information in our mind, proposing at the physical examination specially to examine that organ.

"Does your father ever complain of difficulty of breathing, or of palpitation, or of dyspepsia, or of giddiness, or has he ever had any other symptom of disease besides the rheumatic pains?"

"No, sir. As I said, he is always enjoying the best health, excepting his occasional rheumatic pains."

Treating our patient not as a student of medicine, I asked these questions to discover whether his father had been evincing any symptoms indicating organic disease of the heart. From the reply I infer that such has not been the case.

"What can you tell us of your mother?"

"She died in childbed, on the second day after delivery, after having previously been healthy. She had never complained of any illness."

In this direction the information also is a negative one. "Died in childbed," generally is a very uncertain answer, and when you receive it you must push your inquiry further to obtain the conviction that there really was no disease, to which the patient accidentally fell a victim at the time of delivery.

"Did any brothers or sisters, uncles or aunts, die of any hereditary disease?"

"No sir: they either died of acute diseases, as small-pox, pneumonia, etc., or in childhood, from diseases incident to this period of life, or their death was caused by an accident."

Again negative. In the case of a patient less educated and possessing no medical knowledge, I would have investigated the cause of each death that had happened in the family, and would not have been satisfied with the name of the disease, but tried, if possible, to obtain a description of its symptoms, especially if I had reason to expect important information; but here to save time I have made the inquiry in this general manner. As a rule be careful not to ask so-called leading questions; always try indirectly to elicit the desired knowledge.

"Are any of your sisters or brothers not in good health?"

"No; except one sister, who, during the colder season of the year, frequently contracts a bronch'al catarrh, though otherwise she too is healthy."

These attacks of bronchitis are common, though when met with in ladies, who are not forced to be exposed to the vicissitudes of inclement weather; they generally indicate some hereditary tendency. Either scrofula, tuberculosis, or diseases affecting the circulatory apparatus, are apt to be present in the family of such women. This information we shall also store for a future occasion.

Not having succeeded in throwing any light upon the case by the family history, we will now proceed carefully to investigate the patient's own life, starting from birth and following it up to the present day; for the fact that he was delivered by the aid of the forceps—an information usually obtained from the patient's mother—or that he suffered from convulsions when an infant, and many other occurrences even during earliest childhood, may have a bearing upon his present condition. Next we find out his occupation, and here never be satisfied with such general answers as: laborer, mechanic, etc. Inquire after his real work. Thus, in a painter, you at once think of lead-poisoning; in a coal miner you would search for the coal dust in his lungs; in other occupations, as those of a weaver, a stone-mason, etc., you also have reason to be suspicious of a lung disease, as such is of frequent occurrence in this class of people; again, in another, the inhalation of mercurial vapor may have caused his ailment, or his working as a digger or plumber in damp, wet places, may have given rise to a malady, easily thus produced, and in a saloon or barkeeper you would at once think of the effects of

"treating." Then do not fail to inquire after the habits of a patient. Severe mental labor, carried on late at night, may at once show you the causing element; a drunkard is generally himself responsible for the disease from which he suffers, and individuals eating too little or too much cannot be surprised at their becoming ill. I once had a patient who complained of general lassitude, disinclination to work, sleeplessness, general loss of flesh, utter want of appetite, dyspepsia, constipation, and hallucinations, and of his feeling chilly. His health really seemed to have decidedly deteriorated, but notwithstanding the most searching medical examination, I could discover no lesion. The trouble had been lasting two months, and several physicians had vainly tried their skill. One day I spent over an hour with him, carefully going over his life during the last year, and investigating his habits. I then discovered that three months ago, when his wife with her children had left for England to visit some relations, the patient had commenced to eat in an irregular manner. This had caused dyspepsia, and to rid himself of it he followed the advice of a friend and adopted a diet which had cured the latter. In the morning he drank a glass of hot water, and ate two pieces of bran bread. At noon he made himself a cup of beef tea from Liebig's extract of meat (which, as well known, contains no nourishing material, but is only a stimulant), and with it he again took bran bread. At night one cup of milk and some more bran bread formed his supper. By the aid of this diet the poor man expected to regain his digestive powers, while in fact he was subjecting himself to a process of slow starvation. I put him on healthy, nourishing food, and ordered active outdoor exercise, and two weeks later he had gained twenty-three pounds, and was as healthy as almost ever before. This is an illustration of but one case. In others you will discover masturbation to be at the bottom of the disturbed health, while sometimes mental worriment, not sufficient sleep, too little fresh air, and sedentary habits, have produced the malady. When you have carefully learned everything about the patient, his occupation, habits, mode of living, etc., then inquire after every disease through which he has passed, beginning with those in childhood. For not seldom you will observe that a dropsy following scarlatina was never cured, or that a lung-trouble started with the measles in childhood; not to speak of those diseases which, as acute articular rheumatism, cerebro-spinal fever, etc., are apt but too often to leave some incurable malady as sequela. Syphilis may be in the system, or the individual may still suffer from malaria, whose first acute symptoms appeared some years previously. Sometimes he does not himself know this fact; then the locality in which he lives, and of which you are aware that its air is filled with the miasma of malaria, will tell you the tale.

You search, therefore, for every symptom or every disease which has attacked your patient at any time of his life. Be not satisfied with the name alone, but convince yourself by a description of the symptoms that the malady named really was the one from which he suffered. Then think of every possible sequela of such a disease, and not until you have satisfied yourself that there is no evidence of it in the system, let it drop from the consideration of the case.

That there are diseases specially characteristic of or belonging only to one sex, I scarcely need mention, and you will know that in the case of a female, in this inquiry after her personal history, you must not omit to examine the state of the sexual organs.

After you have elicited all the information that you can obtain regarding the ailments from which the patient suffered in his lifetime, you address yourself to the present disease. You try your utmost to learn its exact beginning, and then follow up its course to the present time. I cannot sufficiently impress you with the importance of this point. Frequently, if you can only obtain an exact description of the commencement of the malady, the diagnosis is established. Never attach weight to a name given; always ask for the symptoms, and thus recognize it. For instance, a patient tells you he had pneumonia a year ago, and dates his present illness from that time, while a description of the symptoms may convince you he had typhoid fever, or pleurisy, or only bronchitis, or something else.

What I have thus far told you concerning the patient's personal history, I will now apply to the case before us; for by this time, after I have been talking with him regarding the history of his family, he has gained confidence, and his initial excitement has vanished.

"What was the first disease in your life that you suffered from?"

"I have been remarkably free from the diseases of childhood, and with the exception of a slight cold I have never been ailing, until about three years ago, when my present trouble began."

"What did you occupy your time with after you ceased going to school?"

"I attended in the West to my father's cattle

ranche; in other words, I have led the life of a cow-boy."

"How old are you?"

"Twenty-eight years."

"You commenced the study of medicine about three years ago, and until that time you were enjoying active out-door exercise?"

"Yes, sir; and from that time dates the beginning of my present illness."

"Did you ever have a chancre, or any indication of syphilis?"

"No, sir; I never had any disease of the sexual organs."

"Were you ever affected with malaria?"

"No, sir."

"Did your present disease commence suddenly or did it gradually develop?"

"It crept slowly on me."

"What was the first symptom that told you you were not in the same health you used to be?"

"A feeling of lassitude and disinclination to work."

"Describe to me the further progress of your ailment up to the present date."

"A state of general debility and anæmia gradually developed themselves; I lost my appetite, and became listless. After this had lasted about a year, I somewhat improved under treatment, and returned to the mountains, but I soon found out that the quieter I kept and the less active exercise I had, the better I felt. The signs of anæmia slowly left me, but the general lassitude, the feeling of exhaustion after the least exertion, and an indescribable sensation of discomfort have continued until the present day and still annoy me."

"You are certain that you have not omitted any important statement?"

"I have told you every symptom of my malady."

Gentlemen, from the personal history of the patient and from his description of his present illness we learn but the following: Until the time when he gave up his outdoor life and commenced the study of a profession his health was good, but after the symptoms of his disease had once made their appearance, the return to active out-door exercise was not followed by an amelioration of the morbid condition. This fact seems to indicate to me, that probably for a long time there has been something wrong in his system; there perhaps was some hereditary influence or some organic lesion, with which our patient was born, but which during his earlier growth or as long as he continued that mode and manner of life to which he was most accustomed, did not show itself. It always is an indication of a grave trouble, if a person, used to a country-life and becoming ill when leading a confined and sedentary existence, does not improve in the least when resuming his active exercise in the open air. Further I observed that Mr. S. was very cautious in his answers; it seemed as if he tried to conceal something which he preferred to leave to my skill to discover. You see he smiles, a fact which confirms me in my suspicion.

When after the described mode of examination you have reached the point at which I have arrived in Mr. S's. case, you proceed to physical exploration, i. e., you investigate the condition of every organ. We may omit in this case an examination of the brain and of the spinal cord, for no indication whatever thus far points to a morbid condition of these organs. We will therefore at once explore the chest.

I find the percussion normal over both lungs, anteriorly and posteriorly, and auscultation reveals the normal vesicular murmur. We may say, therefore, that his lungs are healthy. The impulse of the heart is slightly heaving and can be felt in the fifth and sixth inter-spaces and over a greater area than is normally the case. Such an impulse denotes over-activity of the heart, and may be due to simple excitement of the organ. But applying my ear to the chest, to listen to the sounds of the heart, I find an abnormal condition, which promises an explanation of the morbid symptoms. I beg you to be as silent as possible for a few minutes.

Gentlemen, on carefully auscultating the heart I discover a murmur, whose seat of greatest intensity is to the left and a little above the nipple. It is best heard at the beginning of the second sound, in fact it precedes it, and it is, therefore, strictly speaking, a presystolic murmur. The lesion giving rise to such a murmur, is narrowing, constriction of the mitral orifice, or stenosis of the mitral valve. The second pulmonary sound is slightly accentuated, a fact generally met with in these cases.

The liver is somewhat enlarged, also a common occurrence in organic diseases of the heart. The spleen seems to be of normal size, while the conditions of the kidneys shall be inquired into by an examination of the urine, and the result be reported to you.*

Mr. S. suffers, therefore, from mitral stenosis. It is probable that he was born with it, for noth-

*Neither albumen, sugar, no trube-casts were discovered,

ing in his personal history points to an endocarditis, there having been no rheumatism nor other disease of the blood, nor an injury to the chest to account for it. The increase in the force of the impulse, which denotes an augmented action of the left ventricle, proves to me that there still is compensatory over-activity, but if the lesion had been acquired, there would be demonstrable hypertrophy, finally ending in dilatation of the organ. I do not doubt that there really is some hypertrophy, but it is so slight that percussion does not reveal it. Such a condition is generally met with only in cases born with the lesion, and we often observe under these circumstances an utter absence of all morbid symptoms until a more advanced age.

This case also teaches you not to expect in organic lesions of the heart any symptoms directly referring to the organ. Pain and palpitation are met with far more frequently in functional disturbances than in organic changes of the organ. You have seen in this case that the symptoms complained of were general in character, almost none indicating the existing pathological condition.

But even after you have established the diagnosis, as I did in this case, you must proceed in your examination of all the organs, for complications may exist which would either completely alter the diagnosis, or at least influence prognosis and treatment. Never be satisfied with the discovery of one morbid condition; always investigate the whole system, and every part of it.

Here is no complication; a mistake in the diagnosis cannot have happened.

"How long have you known that you suffered from this disease?"

"Three years."

This fact, *i. e.*, the duration of the murmur, its constancy, proves its organic character. Besides, it is harsh and has a point of greatest intensity. It is neither an anæmic murmur, for such a one would be soft, be heard only at the base, would have long since improved under treatment, and other signs of anæmia would be present; nor is it one of those murmurs of which science has proven but recently that they simulate organic changes, viz., murmurs brought about by an alteration of the blood and a transient change in the size of the organ and the vigor of its action. Such murmurs, often simulating endocarditis, are heard at times in rheumatism. Here, as I said, the history of the case and the duration, constancy and harshness of the murmur, prove it to be due to organic change. Besides, the murmurs simulating morbid lesion usually take the place of the first sound.

In a similar manner you must always try to verify your diagnosis by excluding all diseases that might be mistaken for the one which you discovered. You next ask yourself concerning the prognosis of the case and its treatment. Mr. S. will know, as well as I, that he can never be cured of his complaint. But he may still live many years, until finally dilatation of the organ, or some other incident, especially concerning the lungs, bring about the final issue—though this may take so long that our friend may meanwhile have reached a high old age, and die of some other disease.

Regarding treatment, the patient should simply avoid everything that may overburden the heart. He should refrain from active exercise, but otherwise live according to hygienic rules. His case at present necessitates no special treatment. I might discuss more with you the therapeutic measures often called for by such cases; but as my object was to train you in the examination of patients, and as the hour is near to its end, I herewith close the clinic for to-day.

507 *Franklin street, Philadelphia.*

REPORT OF A CASE OF CONTUSION OF THE ABDOMEN, WITH SOME REMARKS.

BY LOUIS W. ATLEE, M. D.,
Of Philadelphia.

A. C., aged forty-seven years, American, country blacksmith, strong and robust, always enjoyed good health, with the exception of occasional attacks of cynanche tonsillaris. On Sunday evening, November 9, 1884, while handling a double-barrelled shot-gun, the load was unexpectedly discharged, the butt, in the recoil, dealing him a very hard blow in the right iliac region. The gun had the reputation of being a very hard "kicker," having knocked a boy "head-over-heels," as they said, the day before. Immediately after the blow he became so weak he had to be assisted to his room. He complained of being chilly, and had the appearance, it was said, of a man who had received a severe shock. Shortly afterwards agonizing pain in the belly came on, and he began to vomit. When I saw him, 48 hours after the injury, he was lying on his back, the legs drawn up; the expression of face anxious and haggard (Hippocratic); the skin hot and dry; tongue and mouth dry; pulse 120, not very hard (there was some congenital aortic disease). The abdomen was very hard, and somewhat

swollen and tender to palpation over the seat of contusion. No external mark could be seen; percussion note tympanitic, except in right iliac region, where it was dull, not flat. Stomach rejected everything. The vomiting caused great pain; the vomited matters being regurgitated as it were. Respiration thoracic. The family physician said he feared invagination; he had given everything he knew to quiet the vomiting and move the bowels, but so far without success. He had given an enema of soap-suds and water, and gr. xx. calomel by the mouth, just before I arrived. I diagnosed a localized peritonitis, with some cause of obstruction of the bowel, probably from paralysis of the solar plexus, and advised giving nothing by the mouth but ice; enemas of laudanum and starch by the rectum; and to continue to use the poultices over the abdomen, as they had been doing before I saw him. At 7 a. m. the next morning (Wednesday), I saw him with my father, Dr. Walter F. Atlee; his expression was less anxious, complained of no pain, had slept a little, skin warm and moist, pulse 100, vomiting less frequent. Ordered milk and lime-water by the mouth, and to discontinue the enemas of laudanum and starch until the return of the pain. On Thursday evening he was better in every way. Milk and lime-water was retained. My father sent out one dozen of Spanish leeches to be applied over the seat of pain in the belly, but the family physician objected to their application on the plea of the patient being too weak, and they were never used. On the same evening the attending physician applied turpentine stripes over the abdomen, which he said relieved the intestines of much wind by the rectum. He also applied a fly-blister over the seat of injury. Neither myself nor my father saw him again until I was sent for in great haste November 19, 10:30 p. m. When I saw him soon afterwards he was lying on his back, legs drawn up, complaining of frightful pain in his belly, no pulse at wrist, vomiting, and every symptom of rapidly approaching dissolution. His physician told me he had been getting along very nicely up to that evening, with the exception of a slight diarrhœa, when he had the misfortune to get his feet entangled in the blanket wrapped around him as he was returning from the commode; he fell on his face on the floor, and immediately the symptoms which he had, now began. I said he had ruptured the intestine by the fall, and that I could do nothing. He was dead at 12:30 a. m., Thursday, November 20, just 10 days and 13 hours from the date of the contusion.

Post-mortem examination of the abdomen 92 hours after death. Body well preserved. No external mark of injury. Cuticle destroyed where blister was used. Skin of abdomen tense, umbilical region somewhat below the level of surrounding regions. On making the incisions, one from sternum to pubis, and a second at right angles to it above the umbilicus, gas escaped as soon as the peritoneal cavity was opened. Muscles of abdomen red and well developed. Adipose tissue three-quarters of an inch thick. The omentum was strongly adherent to parietes beneath the seat of injury. Intestines glued together by partially organized lymph, more or less injected. Between the parietal peritoneum and abdominal walls at the injured part, was a spot as large as the palm of the hand covered with extravasated clotted blood. In the intestine, lying to the right of the median line, midway between the umbilicus and pubis, was a jagged edged hole, large enough to admit the tips of four fingers; the intestine was empty and collapsed; the intestinal contents, the same as had been passed since the diarrhœa began, had gravitated into the flanks.

Not being permitted to make any further examination, we then closed the abdomen.

We have in the history of this case, a blow on the abdomen, followed by shock, peritonitis, symptoms of enteritis most probably from continuity of structure, a second injury to the abdomen, the fall, which was followed so closely by collapse and death in six hours—the post-mortem showing the intestine to have been ruptured.

In a monograph published in the "Guy's Hospital Reports" for 1858, 3d series, vol. 4, by Alfred Poland, entitled, *A Collection of Several Cases of Contusions of the Abdomen, Accompanied with Injury to the Stomach and Intestines*, I find the most thorough account of the subject.

I cannot do better than quote verbatim the opening paragraph: "A strike, kick or fall on the abdomen, a passage of a wheel over it, or a jamb between two opposing bodies, etc., must never be thought lightly of, and must always be regarded with suspicion and treated in a careful and judicious manner. Many a trivial blow in this region has resulted in unexpected and sudden death, although life has sometimes been prolonged for a short time in agony and suffering, terminating in collapse and death. This can be readily accounted for when we consider the numerous and vital structures contained in the abdomen; and also that these structures are enclosed within soft elastic parietes capable of great distension, while although readily able to resist

shock and extreme violence without injury to themselves, yet may allow the force to be transmitted and expended on the contents with dire effect, without an external mark."

A blow on the abdomen may cause sudden death (Sir Astley Cooper's case), or may be followed by simple traumatic peritonitis. Yet in by far the majority of instances of this class of injuries, some internal rupture or lesion always takes place, and in such cases life is seldom extinguished at once, but prolonged for a more or less short period, and ending fatally either in protracted collapse, or in fatal internal hemorrhage, or in subsequent severe peritonitis; few recover, and those only from circumstances of an extraordinary character. Injuries to the intestines may sometimes be followed by acute or chronic inflammation of the coats, causing what is termed traumatic gastritis, enteritis and colitis. One or all the coats of the bowel may be ruptured.

The effects of a ruptured bowel may be divided into two stages: The primary stage. The person feels the sensation of a blow; he gets up, but is soon seized with a peculiar depression of the nervous system, faintness, rigors, chilliness, and collapse. When the slight reaction ensues, the patient complains of the excruciating pain at the seat of injury, the features assume the Hippocratic expression, vomiting begins, the belly swells, and the abdominal muscles become hard and rigid. There may be retention of urine. These symptoms are caused by the effusion of the contents of the bowel into the peritoneal cavity, and will be modified accordingly as the bowel is full or empty, and the size of the rupture, and they will be more severe as the rupture is situated—the further from the stomach the less severe, and *vice versa*.

The secondary effects develop themselves in from six to twenty-four hours. These consist in all the symptoms of traumatic peritonitis. If immediately after the injury the abdomen becomes tense and tympanitic, it is a sure symptom that the bowel has been ruptured and allowed the air to escape.

The most general result of rupture of the intestine is death, which may come on during the primary stage of collapse, or from the subsequent peritonitis.

Recovery is possible, depending on the size and seat of the rupture and the condition of the bowel, but above all on the treatment adopted.

Repair may take place by the torn bowel adhering to some of the near structures, or the effusion may be circumscribed, abscess follow, a stercoraceous fistula resulting.

The most appropriate treatment is perfect rest on the back, nothing but ice to suck by the mouth, and opium to allay pain and the peristaltic action of the intestines.

Leeches may be put on during the inflammatory stage with benefit. Blisters are harmful. Warm fomentations are grateful to the sufferer. No food should pass the lips till after the fifth day; all food and stimulants necessary should be given in enemas.

If the symptoms of approaching dissolution are not too imminent where one is called to a case of ruptured intestine, could not the abdomen be laid open by an incision, the ruptured bowel sought for and sutured? When the rupture is very small, there will not likely be any extravasation, and the symptoms will not be so alarming, more especially if the rupture is in a part of the bowel distant from the stomach, and nothing has been given by the mouth. Such cases, no doubt are more numerous than believed, being looked upon as cases of simple traumatic peritonitis. But seeing that when the bowel has been torn sufficient to allow of extravasation, the result has been invariably fatal, with one exception (a case of circumscribed extravasation, followed by stercoraceous fistula, afterwards pyæmia and death), should not the only chance possible be given, *i. e.*, that of closing the torn gut? Life has been saved when death was imminent by removing a brust ovarian cyst, a ruptured extra-uterine fœtal cyst, or what is more to the point, by removing the cause, in obstruction of the intestine. If the small intestine were torn, the better course to follow would be to suture the rent, and clean the peritoneal cavity; if the large intestine, the edges of the rent could be united to the edges of the incision in the abdominal wall, establishing a fœcal fistula.

210 *S. 13th Street, Philadelphia.*

Hospital Reports.

ON THE TREATMENT OF ERUPTIVE FEVERS.

BY PROFESSOR DUJARDIN-BEAUMETZ.

Hospital St. Antoine, Paris, France.

Translated from advance sheets by Dr. Hurd, of Newburyport, Massachusetts.

GENTLEMEN: By their symptomatic aggregate the eruptive fevers constitute a natural group in the class of fevers, and the therapeutic indications which pertain to them deserve to arrest our attention for a short time. Of these so-called zymotic fevers, small-pox possesses especial interest on account of the prophylactic treatment peculiar to

this disease, and on this subject I have a good deal to say.

In consequence of the hideous aspect which the face presents when covered with pustules, the repulsive odor that comes from the patient, the unsightly cicatrices which the malady leaves behind it, and its extreme contagiousness, small-pox merits to be regarded as one of the most terrible of epidemics, and it is an important duty, on the first appearance of this formidable scourge, to endeavor by every means to limit its ravages.

Do not persuade yourselves, gentlemen, that this word ravages is a figure of speech, it is on the contrary the vigorous expression of the truth. When in fact small-pox smites populations which have had no protection or immunity from the disease, as is sometimes seen in certain races that inhabit the interior of Africa, or the Polynesian Islands, whole communities have been swept away by the lethal epidemic, and you can judge of the fatality of these epidemics, in recalling what happened only three years ago (in 1880), at the time of the arrival in Paris of a tribe of Esquimaux, which contracted small-pox during its peregrinations in Europe. All were attacked, and all succumbed. The observation of facts furnished a first means of preservation; it was remarked that persons who had once had the disease were ever after protected from its invasion, and either as the result of accident, or by a process of experimentation, inoculation for the prevention of small-pox came into vogue.

This inoculation or variolation has been, for many centuries, practiced by the Chinese, who make use of pock-scabs which they introduce into the nasal fossa. Then it was put in use in Circassia to protect young girls who were to be sold in the markets of Constantinople, and it is from this source that the wife of the English Ambassador, Lady Mary Wortley Montague, in 1721, obtained her knowledge of inoculation, which she communicated to the people of her country, whereupon this practice speedily spread over all Europe. But notwithstanding all the precautions that were taken, this variolation was not without danger, for inoculation from a mild case of the disease may engender small-pox in its most serious form, and although a real progress was made by inoculation, there was nevertheless a mortality of least one in three hundred. Jenner, who was as you know, a physician-inoculator in England, by his immortal discovery, substituted vaccination for inoculation, and from henceforth civilized man was in possession of a perfect prophylactic treatment for small-pox.

I shall not here discuss the value of vaccination. I am aware that there exists a small and uninfluential group of physicians who, under the name of anti-vaccinators, pretend that not only is the discovery of Jenner inefficacious, but that it is even dangerous; but their specious arguments have not lessened the preservative value of vaccine, a value to-day indisputable, and which all the countries of Europe and of the world make haste to recognize, by favoring the promotion of vaccination, and by making it a legal obligation. France has not yet enforced this obligation by legislative enactment, although it has done so in a round-about way, by making attendance at schools and military service obligatory, and in requiring a certificate of vaccination and of revaccination as a condition of admission to the public schools and the army.

I shall not examine here all the questions which the origin of vaccine has raised, viz., whether it comes exclusively from the cow or in the first instance from the horse. Whether cow-pox and horse-pox are anything but real small-pox developed in animals? Whether there is identity between human variola and animal variola? These are problems of experimental physiology which are far from being solved, despite numerous laborious investigations, in particular those of the veterinary school of Lyons and its chief Chauveau. Yes, it seems demonstrated that horse-pox and cow-pox are the small-pox of the horse and cow, but when you come to inoculate these animals with the human pock you obtain a product which gives you for the human subject not kine-pox but small-pox. The identity of vaccine virus and variola virus is only a hypothesis, but which will shortly become a scientific reality, thanks to the brilliant discovery of attenuated virus by our illustrious colleague Pasteur.

I cannot here resist the desire to say a few words concerning this doctrine, which, originating only a few years ago, occupies so great a place in the prophylactic treatment of diseases, and which has thrown so much light on the history of virulent and infectious maladies.

Carrying out the fruitful line of inquiry suggested by vaccination, Pasteur has shown that it is possible by special cultures of microbes, the supposed agents of contagion in virulent diseases, to change the character of the bacilli, or, to use the happy expression of Bonley, to domesticate them, and thereby create new varieties, which, while maintaining a protective power on the animal in which they have been inoculated, develop only a mild form of the original disease. This is what he has accomplished for chicken cholera, for swine plague, and especially for anthrax, or splenic fever, and to-day it is by tens of thousands that we count the flocks and herds that he has saved from this deadly anthrax by his experimental vaccination. It ought to be the same for small-pox and vaccine, but we have not yet found methods of culture for developing the vaccinal virus, and it is necessary that small-pox should undergo attenuation in the organisms of certain animals, such as the horse and cow, before the resulting virus can be truly protective.

Does the vaccine virus, you may ask, contain a microbe? Undoubtedly; and Klebs considers it as absolutely identical with that of small-pox. Chauveau, moreover, showed us in 1868 that vaccinal lymph deprived of its solid corpuscles, becomes inert.*

*Gluge, in 1838, was the first to describe in vaccinal lymph certain crystals which he believed to be the essential principle of this lymph. These crystals were nothing but brilliant corpuscles, which have been since described under the name of corpuscles of Gluge. Chauveau, in 1868, pointed out this capital fact, that when we deprive vaccine matter of the corpuscular elements which it contains, the vaccinal lymph becomes inactive. To obtain this complete separation, Chauveau employed the process of diffusion, and to a stratum of virulent liquid he added, carefully and slowly, a stratum of water; intermingling took place, and

You all know the methods of vaccination, and I need not here give you any rules for this operation, nor any description of the vaccinal eruption, only reminding you that it seems to-day demonstrated that the number of vaccinations and the intensity of the vaccinal eruption have a certain part in the protection conferred, and the statistics of Oppert and of Russell seem to me in this respect to be very conclusive. But one point on which I ought to insist is the necessity of revaccination; in fact, vaccine seems to lose its protective properties in about ten years; therefore, all the governments which have made vaccination compulsory have been careful to enjoin revaccination.

Of all the dangers which have been attributed to vaccine, there is but one which deserves your serious consideration: it is the possibility of inoculating syphilis when the matter is taken from a syphilitic subject. To-day it is perfectly demonstrated, and by observations, unhappily too numerous, which amount in our country to more than 120 cases, that vaccinal syphilis exists, and that too much care cannot be taken in the choice of the subject from whom vaccine matter is obtained. This consideration has had a good deal to do with the success which has attended animal vaccine, a kind of vaccination which Lanoix and Chambon imported from Italy in 1856 to our country, and you may see in this hospital the success which has been obtained by this bovine vaccination, to-day adopted by all the countries in Europe as well as in America. For my part, I consider animal vaccine just as good as human vaccine, with this advantage, that there is certainty of exemption form the danger of syphilis.

But now that the experiments of Villemin have been strongly confirmed by the discovery of the *bacillus tuberculosis*, one may ask if in this way tuberculosis, so frequent in kine, may not be transmissible by vaccine. So far we have had no proof of this fact, but it deserves to be discussed, and Warlomont, in his interesting work on vaccine, has devoted to the refutation of the possibility of inoculation of tuberculosis by animal vaccine, an interesting chapter, to which I refer you. Whether it comes from the infant or from the animal, vaccine matter may be preserved a considerable time. At our Academy of Medicine, where the humanized lymph alone is used, the vaccine is kept only incapillary and glass tubes. In countries where they make exclusive use of animal vaccine, which is more difficult of preservation, they employ the scabs, or dried pustules reduced to powder or paste, and my pupil, Dr. Crando, of Nice, has shown the activity and the easy preservation of these vaccinal preparations.

Vaccine constitutes, with hygienic means of isolation, the only prophylactic treatment of variola; all others are illusory, and even dangerous. The hygienic measures comprise an aggregate of means for the isolation of the patient—means especially necessary in our hospitals—and you see to-day the good effects of this isolation, thanks to the measures, incomplete it is true, which have been adopted by the Board of Public Charities and the Prefecture of Police, which have put at our disposal certain isolated barracks and special vehicles for the transportation of small-pox patients.

We know at the present day almost with certainty the mode in which the contagion of small-pox is received into the system, namely, by the respiratory passages, in most cases, if we can rely on the experiments of Zueger on animals. Brouardel had in fact previously shown us by examination of the air of small-pox wards, that this atmosphere was charged with numerous particles coming from desiccated variola pustules, and it is by the penetration of these particles into the respiratory passages that small-pox virus enters the blood. From these experiments, too, we may conclude that at the period of desiccation of the eruption we should redouble our efforts to prevent the dissemination of contagion. Unhappily, this is the period of the disease when the medical attendant finds himself most important, and till persons convalescent from small-pox shall be restrained by stringent legal enactments, we shall find it hard to prevent them from going abroad and carrying with them wherever they go, the contagious elements of the disease.

As for the treatment proper of small-pox I shall have little to say; during the invasion we can in some cases favor determination of blood towards the skin by means of sudorifics, and especially the spirits of mindererus. You will often have to combat the pain in the back, and the obstinate constipation, symptoms of the first stage. You can generally remedy the first by means of certain liniments (such as chloroform and spirits of turpentine of each 1 part, and liquid opodeldoc 8 parts); the constipation can generally be overcome by mild purgatives. Next comes the eruption; if it is discrete, if moreover the subject has been vaccinated, no active interference will be required; not so if the eruption be confluent, and all your efforts will be required, especially if your patient be a young female, to prevent the eruption from following its course, and causing disfiguring cicatrices. For this end various means have been proposed. Mercurial preparations, and in particular alum ointment and the emplastrum de y. vigo have the curious property of preventing the development of these pustules, and this abortive power has been utilized by covering the face of the patient with masks made of these preparations. Aran and Delioux, of Savignac, have proposed to substitute for these ointments a collodion made with corrosive sublimate; unfortunately, this collodion, however elastic it may be supposed to be, yields readily to the distension of the skin attending the eruption, and notwithstanding the real advantages of this method, I have had to abandon it and return to the primtive process of Zimmerman.

(*To be continued.*)

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all the soluble parts of the serum were diffused through the water; the upper part of this mixture, when animals were inoculated with it, did not reproduce the vaccine. According to Hiller, the contagious principle of vaccine resides in certain pale opaque granules, some soluble in solution of potassa, others insoluble. Klebs believes that he has found the microbe vaccine; he claims that it is identical with that of small-pox; it has for dimensions $\frac{1}{7000}$ of a millimetre; it presents itself often in groups of four, whence the name of *micrococcus quadrigeminus*. Gluge, *Anatom. Microscop.*, Winden, 1838. Chauveau, *Nature des Virus*, etc., (*Acad. des Sc.*, February, 1868). Klebbs, *Arch. für Experim. Path.*, t. x. p. 2 and 3. Hiller, *Untersuchungen über das Contagium der Kuhpocken* (*Centrabl.*, No. 20 et 21, 1876).

MEDICAL SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting November 6, 1884. The president, R. A. Cleemann, M. D., in the chair.

Removal of Uterine Appendages for Menstrual Epilepsy—Recovery.

Dr. E. E. Montgomery exhibited the specimens and read the history of the case. Sarah H. æt. 17 yrs. was admitted to the Philadelphia Hospital, April, '84. She suffered from an attack of inflammatory rheumatism in childhood and began to have epileptic seizures in her thirteenth year; they were slight at first, but have recurred every month increasing in number and violence so that at present she is unconscious from ten days to two weeks out of each month. There has only once been a trace of menstrual discharge, and that for a single day only. There is no history of an chronic disease in the family, brothers and sisters are healthy. The patient was pale, flabby, anemic, poorly developed, and extremely nervous. The external genitals were but slightly developed, the uterus small, and no special tenderness over the pelvis. Iron, tonics and generous diet were given; the bromides were not well borne. Owing to her youth and the fact that she had not yet mensturated, it was deemed best to undertake to establish the menstural function and exhaust the anti-spasmodies before resorting to operative interference. The failure of all remedial measures was complete, and on September 13th the operation was performed; both ovaries and tubes were removed. No antiseptic was used about the wound. All the water used had been well boiled. Absorbent cotton was placed over the wound, which had been closed with silk sutures. The operation occupied thirty-five minutes. The recovery was uninterrupted until the night of the 26th of September, when she had four epileptic seizures. There were recurrences of slighter attacks during the next three nights, but they were shorter and during the intervals she was perfectly conscious. During the first four days of October, spells of staring with momentary unconsciousness occurred, becoming less frequent and lighter. A well-marked convulsion on the night of Oct. 14th was followed by from one to four convulsions daily until the 29th. But they have not been so severe as before the operation.

Removal of the Parovarian Cyst—Recovery.

Dr. E. E. Montgomery presented the specimens, and related the history as follows: Miss A., æt. 30 years, native of England, married, never pregnant, has suffered from an enlargement of the abdomen for seven years. As it was first noticed a few months after her marriage, she supposed herself pregnant. Her menses have never been interrupted, now occur every three weeks, are very slight, and have never been excessive. She suffers from severe pain the week before menstruation, over the lower portion of the abdomen and through the hips. She suffers at other times from pain in the feet and legs, and from a sensation of weight. The tumor has been tapped some six times. The fluid was always of a pale straw color. The largest quantity removed at any one time was 40 pounds. Previous to its removal, her weight was 102 pounds. The last tapping was on June 27, 1884. She has had four attacks of peritonitis.

When first seen, last July, two weeks after the last tapping, the abdomen was swollen and tender to pressure; fluctuation was distinct. Since that time the abdomen has increased considerably in size, presenting a prominent tumor distending the whole abdomen, nearly symmetrical, but projecting slightly to the right side; circumference at umbilicus 32″; distance from symphysis to umbilicus 7″; to ensiform 13″; fluctuation distinct over the whole tumor; coughing projects the whole mass forward and downward. Her general condition is good. She is quite active.

Diagnosis.—A par-ovarian cyst.

Plan of Operation.—Exploratory incision; remove the tumor if possible, but if the adhesions were too great to permit that, then to open the sac, stitch it to the integument, and introduce a drainage-tube, and thus secure obliteration of the sac.

Operation.—October 9. Abdominal wound 4″; adhesions universal, but generally broken up without difficulty; no ligatures were needed. The intestines were not seen, being concealed by old inflammatory deposits. The right ovary was enlarged and was also removed. The wound was closed with seven sutures, and a glass drainage-tube introduced. Salicylated cotton in a thick layer was placed over the wound. Suppositories of morphia were used to control pain, which continued to a greater or less extent for two weeks, arising partly from inflammatory conditions, and partly from collections of gas in the intestines. The abdominal wound discharged freely—three ounces the first day. The drainage-tube was removed on the 13th, four days after the operation, but the discharge of bloody serum, pus, and flaky lymph continued for full two weeks later, when the wound closed entirely, and the patient was discharged.

Dr. B. F. Baer presented the specimens, and read the following report of a case of

Placental Polypus which Simulated Malignant Disease of the Uterus.

The patient was thirty-five years of age, married, and had two children at full term, the last twelve years ago. She has had several abortions since, but otherwise she has enjoyed good health. Her mother died at the age of thirty-eight, of cancer of the uterus. In the early months of this year our patient first noticed that her catamenia were becoming too frequent, and were attended with expulsive pains and a fetid watery discharge in the intervals. The blood loss increased in quantity, and she soon began to show signs of failing health in pallor and loss of flesh. She would not permit a physical exploration until the latter part of July, when she had a violent flooding, with great pain.

Examination now revealed to Dr. R. Armstrong, of Lock Haven, Pa., whose patient she was, a healthy condition of the cervix and a normal os, but the body of the uterus was enlarged to more than double its natural dimensions; it seemed to be symmetrical and rather softer than usual.

The hemorrhage was controlled by ergot and rest. Although the grumous fetid discharge and the uterine tenesmus continued, she did not have another severe attack of metrorrhagia, probably because of her exsanguine condition, and the fact that she was suffering from septic absorption. Her temperature rising as high as 104° in the afternoon, she had distinct rigors. Her abdomen was tympanitic, and very tender to the touch. The physical condition of the uterus led the doctor to introduce two tents into the cervical canal on September 23. They were allowed to remain twenty-four hours, although their presence increased the violence of the symptoms. When the tents were removed, a rather soft, friable mass could be felt presenting at the internal os. This led to a fear that the disease might prove to be malignant. A severe colliquative diarrhœa now set in, and the patient's strength became so much reduced that nothing could be done except to administer remedies to check the diarrhœa and prevent collapse.

On the morning of the 25th, through the kindness of Dr. Armstrong, I saw the patient; temperature 103°, pulse rapid and weak. Stomach irritable, rejecting everything taken; bowels still quite relaxed. Her face presented the ashy hue of malignant disease. The outlook was not favorable for an operation which would necessitate the dilatation of the cervix sufficiently to remove the diseased tissue, which evidently occupied the uterine cavity, but it was the only course to pursue. Ether was administered. The uterus was found retroverted and adherent to the floor of Douglas's cul de sac. The cervix was rigid, but slightly patulous. In view of the existing peritonitis, we concluded that it was best that I should endeavor to remove the contents of the uterus without a further attempt at dilatation, fearing rupture of adhesions and increased inflammatory action. I passed the wire loop of the écraseur through the os, and by careful manipulation luckily succeeded in guiding it over the tumor, and up to its attachment. Drawing upon the wire, it closed around the pedicle and severed it. The tumor was seized with a volsella forceps, and delivered. The index finger could now be passed into the cavity of the uterus. The pedicle was situated on the posterior wall near the fundus. The tissues at that point were soft and friable, but the remainder of the surface of the uterine cavity appeared to be free from disease. The stump was cauterized with nitric acid, and a two-grain opium suppository placed in the rectum. Convalescence was rapid and satisfactory.

On section and close examination, the specimen very much resembles placental tissue, and the microscope shows typical placental villi in its structure. It is the *placental polypus* described by C. Braun, in 1851, and somewhat resembles the *fibrinous polypus* of Kiwisch, who thought that these polypi might arise from long persistent hemorrhage, a kind of apoplexy of the womb; a large coagulum forming, the upper part consisting mostly of fibrine and adhering by a stalk to the uterine wall, whilst the lower consists of red, soft coagulum, having a coat of firm fibrin. Scanzoni does noes not admit this view. He contends that these are cases of abortion, and would therefore fall under the class of placental polypi (*Barnes*). My own experience argues with that of Scanzoni. These polypi cause profuse metrorrhagia, and and sometimes, as in this case, blood poisoning.

This case furnishes another strong argument in favor of the entire removal of the decidua or placenta after abortion. Who can tell how many lives are lost, or in how many cases the health is undermined by a neglect of this procedure? Death would inevitably have occurred in this case if the uterus had not been emptied. The patient may suffer for months or years, as a result of neglect. In this instance the fault was in the patient, for she had been properly advised by her physician. It is true that many cases escape without serious injury, but that does not prove that the principle and practice of immediate removal is not always the safe one; for here is a case where a neglected abortion had apparently passed off safely, but it almost destroyed the patient's life a long time afterward.

Malignant disease was properly suspected from the rapid development of such grave symptoms, from the general cachectic appearance of the patient, and from the sensation conveyed to the finger when touching the growth *in situ*. But when it was found that it had a limited point of attachment, and that the uterine cavity was healthy at all other points, this hypothesis was weakened; and when more careful examination of the specimen and investigation with the microscope showed it to contain placental villi, its benign character was assured.

Dr. Montgomery remarked that in cases in which partial dilatation of the uterine canal had been accomplished before the patient presented, the best instrument to continue the dilatation is the mechanical urethral dilator of Dr. A. H. Smith.

Hair-pin in the Uterus.

Dr. B. F. Baer exhibited a hair-pin removed from the uterine cavity of a patient sent to him by Dr. Pancoast, of Camden, N. J. The woman, believing herself to be pregnant, had tried to produce an abortion by inserting the pin by grasping the points and inserting the blunt end. The patient had obtained a view of the parts in a mirror placed upon the floor. The presence of the pin was readily detected by the uterine sound. He at first thought of dilating with tents, but the patient being greatly alarmed and very importunate, he used the steel dilator. One point of the pin became imbedded, in its descent, in the tissues of the cervix, and required dissection to release it.

Dr. Wharton Sinkler exhibited a hair-pin removed from the vagina of a patient who had tried to introduce it into the uterus to produce abortion. She had failed in her purpose, and had also failed to remove it from the vagina. The doctor found the points of the pin widely separated, presenting downward, and hooked into the walls of the vagina; by bringing the points close together, the pin was removed without difficulty. It had been in the vagina for some time.

Dr. Montgomery stated that, while a student, he had seen a hair-pin removed from a vagina. It was thickly encrusted with a calcareous deposit.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday evening, November 13, 1884. The President, Dr. Shakespeare, in the chair.

Some Studies on the Micrococcus of the Pleuro-Pneumonia of Cattle.

By Thos. D. Dunn, M. D.

On September 25, 1883, through the kindness of Dr. Bridge, Assistant State Veterinary Surgeon, and Mr. Thomas Edge, Commissioner of Agriculture of Pennsylvania, I was invited to be present at an autopsy on some cows suffering from pleuro-pneumonia, their condition being such that recovery was deemed impossible. Mr. Edge ordered them killed.

As a description of the macroscopic and microscopic condition of the lungs was read before this Society a year ago, and as it would have no special bearing on the bacterian nature of the disease, a detailed account will be omitted.

Suffice it to say, the lung is completely solidified, the air-cells filled with effused blood, serum, and lymph, which usually extends into the small bronchial tubes. Portions of the consolidated lung and blood from the heart were placed in a bottle which had been thoroughly cleansed, and the bottle closed with a ground-glass stopper. These were examined microscopically by Dr. Geo. Martin and myself, and were found swarming with germs—*micrococci*. These little bodies, although seen distinctly with a power of 670 diameters, are best studied with a power of 1000. They are colorless, globular or oval in form, outline regular, and refractive power notable. The Brownian movement is marked; this is a tremulous motion not peculiar to *micrococci*. It is common to inorganic particles as well as minute vegetable and animal organisms. They do not seem to move in a manifest manner, independent of the currents of liquid in which they exist. They measure from a third to a half micro-millimetre, or from $\frac{1}{4000}$ to $\frac{1}{2000}$ inch in diameter. They are not dissolved by ether, alkalies or acids, and take the staining of aniline colors slowly. I have, however, succeeded in staining him by first treating with aqua ammonia, then with staining fluid and afterwards washing with a weak solution of nitric acid. They have recently been more satisfactorily stained by a two per cent. alcoholic solution of methyl violet. They multiply in nitrogenous culture fluids at ordinary temperatures by millions. They are generally separate, though sometimes united in pairs, and little cellular colonies forming distinct zoöglœa. From the fact of their being occasionally seen in pairs, it is reasonable to suppose that multiplication is taking place. They resist putrefaction, for the cultivation tubes started September 26th swarmed with them two months later. When the nitrogenous material is exhausted, their growth is stopped, and the remain in a latent state, as it were, until additional food is given, or they are transplanted into fresh fluids. After the tubes stand a few weeks, the membrane formed on the top sinks to the bottom, and the liquid above clears. That they are not dead, but only in a state of repose, is evident from the fact that they multiply anew when inoculations are made from them, but less rapidly than inoculations from more recent cultures.

Dr. J. J. Woodward, U. S. A., presented at a meeting of this society, in 1861, a pleuro-pneumonic lung, and mentioned certain "spores of fungi" found in both the healthy and diseased lung, but he did not describe them. These "spores of fungi" are probably the *micrococci* under consideration. Aside from this, I have not found any record of them, but unfortunately I have not had access to the literature pertaining to this subject.

The following culture experiments were made with the serum virus taken from the diseased lung. The culture fluid consisted of extract of fresh beef, made by chopping it fine and pouring over it hot water. After maceration the juice was expressed and the extract boiled for several minutes. It was then filtered, and again boiled, to thoroughly destroy all germs. It was then placed in culture-tubes, which had been washed in a solution of corrosive sublimate, and afterwards boiled. The tubes were closed by absorbent cotton, which was sterilized with corrosive sublimate and the application of dry heat. After the culture fluid in the tubes had cooled, a minute quantity of the serum was introduced by a small knife whose blade had been heated in a spirit lamp. The tubes were then placed where the temperature ranged from 90° to 120° Fahrenheit. On examination of these tubes on the 28th, the liquid was found turbid, a thin membrane formed over the surface, and there was a slight deposit. Under the microscope, thousands of *micrococci* were seen. From this cultivation a second was made, and after standing 48 hours the surface membrane, cloudiness of fluid, and slight deposit appeared, and myriads of *micrococci* were found. From this a third generation was started, in which appeared a few *bacilli*—the first discovered.

They are very active, colorless bodies, measuring from three to five micro-millimeters in their long diameters, and from one-third to one-half in their short. Their movements are at times rapid; again they are in a state of repose. Sometimes one will remain a long time motionless, then suddenly dart across the field of the microscope, setting many of its fellows in motion, who seem to catch the spirit of the active *bacillus*. At one time they advance with the rapidity of an arrow, then retreat or describe circular lines. It was noticed in those cultivations in which the *bacilli* were found the surface membrane was thicker and more tenacious. In cultivations conducted at a lower temperature the development of *micrococci* was not so rapid. Fearing that some atmospheric germs might have been introduced with the culture, other cultivations were begun from the second generation, in which no *bacilli* were found. The culture fluid was boiled at intervals, to kill germs that might develop from spores not destroyed by previous boilings, and as a further test non-inoculated tubes were placed by their side. In forty-eight hours the former were swarming with both bacilli and micrococci, while the non-inoculated ones remained clear for ten days. These subsequently developed germs after inoculation.

A second series of observations was commenced with fresh virus obtained October 4. The first and second cultures were pure, but in the third *bacilli* appeared, and in the fourth they had greatly increased. It is difficult to explain the relation these forms bear to each other, as to whether the *bacilli* are organisms developed from the *micrococci*—the latter being in a sporal stage

of their growth—our investigations will not justify a positive answer. Koch has determined that the *bacilli* of anthrax develop veritable spores, and they in turn develop *bacilli*. Several other observers held this view, and according to the investigations of Koch, Cohn, and Pasteur upon the development of bacteria, it is probable that the spores of *bacilli* and other bacteria are identical with *micrococci* in form, aspect, and behavior toward chemicals. In those diseases in which certain *bacilli* and *micrococci* are found to be the virus, it is impossible to distinguish them from harmless ones by their microscopical appearance; that is, a specific disease germ can only be determined by its effects on living organisms. The *micrococcus* of pleuro-pneumonia, so far as present observations go, is identical with that of diphtheria, chicken-cholera, and the recently-discovered *micrococcus* of scarlet fever. It is further found that this germ of virulent matter rendered harmless by attenuation does not differ microscopically from the unattenuated, which destroys life. I have made no inoculations on animals with the micrococcus of pleuro-pneumonia, but a few cows have been inoculated by others without any reference to a special virus or cultivation of the germ, and the disease was transmitted. However, several experiments have been made in view of destroying the germ, the results of which I will briefly state. A tube containing cultivated *micrococci* was boiled, and from it a second was inoculated. In 36 hours the tube contained many *micrococci* showing that the germ is not destroyed at 212°. A culture fluid to which had been added ten per cent. of alcohol was then inoculated. No *micrococci* had developed one week later. One and a half per cent. of benzoic acid with borax to dissolve was then added to a culture fluid: neither *micrococci* nor *bacilli* had appeared six weeks afterwards. Another culture was started, to which was added corrosive sublimate in the proportion of one-half grain to the ounce. In three weeks there were no traces of germ life. To test the influence of cold on these organisms, a tube containing cultivated germs was frozen, and from this sterilized liquids were inoculated. In forty-eight hours they contained myriads of *micrococci* and a few bacilli. A portion of diseased lung was frozen, and inoculations from this grew in about the same time. It was afterwards found that the cotton, which had been sterilized by heat and corrosive sublimate had been inadvertently exposed to old cultivations and decomposing organic substances, and it is possible that bacteria were introduced by it. When I repeated these experiments, it was found that while inoculations from non-frozen virus develop *micrococci* in a few hours, it requires several days for sowings from frozen specimens to grow in the same culture fluid and under the same conditions of temperature. Whether they were not exposed to cold long enough to destroy the germs, or the influence is only sufficient to render them inactive, further investigations will be required to determine. It is my impression that cold will check the spread of this contagion, but not destroy it altogether, and that when the disease once attacks an animal cold will have no influence upon it, though it may prevent the spread of the infection to others in the same herd. The power of medicinal agents to control the disease seems to be very feeble. It would appear that corrosive sublimate, alcohol, and benzoic acid arrest the growth of these germs, but whether doses sufficient to destroy them can be administered without endangering life our veterinary surgeons must determine.

Dr. Shakespeare said that he had read of two attempts within the past year or two, to isolate the micrococcus of this disease. Bruylants and Ferriers united in an attempt of this kind, and have reported their observations in the *Bull. de l'Academie Belgique*, 1880, to the effect that they found a micrococcus constant in the pleuritic and alveolar exudate. More recently, the report of Poels and Nolen, of Rotterdam, has appeared, in which they describe the isolation and culture of many generations of micrococci.

Moreover, they have compared them with those of human pneumonia, claiming their identity morphologically, and with regard to their mode of growth; and a further identity as to the results of inoculation, their experiments showing that pleuro-pneumonia in cattle has been produced by inoculation of the cultures of micrococci from human croupous-pneumonia as well as by inoculation of cultures from the pleuro-pneumonia of cattle. The latter report is published in the *Centralb. f. d. Med. Wiss.*, No. 9, 1884.

Dr. Formad said that this micro-organism had also been seen and described by Veterinary Surgeon Lyman, who had presented a very elaborate report to the Department of Agriculture. Dr. Quile, both a medical man and a veterinary surgeon, also had worked in pleuro-pneumonia for two years in the Pathological Laboratory of the University of Pennsylvania, always finding the micrococcus present, and in pure cultures kept up for many generations, he had not observed any other bacteria. He had inoculated two calves with large quantities of the culture, and had failed; whence he had concluded that the micrococcus was not the cause of the disease. He remarked as fact in favor of the micrococcus being the cause of the disease, that these organisms are chiefly found in the lymph, and that in pleuro-pneumonia enormous lymph-spaces are developed in the lungs, which are filled with a grumous liquid containing micrococci in large numbers, while the contents of the alveoli contain very few micrococci, but swarm with other bacteria.

Dr. Dunn, in his concluding remarks, said that one point of interest had been omitted in his paper, which was, that the cattle from whom the specimens had been obtained had been first knocked down, then bled to death, and buried *superficially* in a field, through which flowed a stream from which neighboring herds were watered. In a few weeks the disease appeared in these cattle also. As to the literature of the subject, he had not access to sufficient to familiarize himself with any investigations made by others. Some experiments with reference to inoculation have been successfully made in France and England. The lymph was introduced into the body and tail, and was found to protect the animal from the disease. When the virus was inserted into the tail with proper precautions, the mortality from the operation was less, being from one to two per cent. It was also found that when the tail became greatly inflamed, it could be removed to

limit the inflammation, and still afford protection to the animal. Inoculated animals did not communicate the disease.

[A specimen of tumor of the bladder was presented by Dr. J. H. Musser, the account of which has been, by his desire, held for future publication.]

(To be continued.)

EDITORIAL DEPARTMENT.

PERISCOPE.

Mitral Stenosis and Insufficiency.

The following interesting case is reported by Dr. T. C. Railton in the *Lancet*, November 15, 1884. He says:

The following notes of a case of mitral disease may be useful as showing how very important symptoms may be sometimes masked by other conditions, and the diagnosis thereby rendered difficult. They show as well, in a tolerably typical manner, the picture of the heart's gradual restoration from asystolism to comparative well-being, with the disappearance concurrently of all the symptoms depending upon the former state.

T. W——, aged thirty-two years, book-keeper, came under treatment on March 10. His father died from heart disease and bronchitis at fifty-four years of age, but there was no further history of rheumatism or heart disease in the family. Although always troubling himself a good deal about business and working hard, the patient had considered himself to be a healthy man until quite recently, with the exception of three attacks of bronchitis which he had suffered from during the past winters, the cough, however, disappearing when the warm weather came. So far as he knew, he had not been under the care of a medical man; he had never suffered from rheumatism, from shortness of breath, nor had he lost flesh. During the last month he had taken cold and had a cough, with occasional hæmoptysis and shortness of breath; but he continued at his business until two days before coming under treatment, when his increasing disorder compelled him to remain in bed. When first seen, he was found to be suffering very considerably from dyspnœa, which was aggravated by the slightest exertion. He had to be propped up in bed, and was much distressed by a constant hacking cough, bringing up a sputum tinged with blood. He had no signs of congestion in the face, being quite pale. He was perspiring freely, and there was a sour smell present, like that of acute rheumatism. He had, however, no elevation of temperature and no joint affection. There was no œdema of the extremities nor any perceptible ascites, but the abdomen was considerably swollen over the region of the liver. His fingers and toes were very decidedly clubbed at their ends. On examining the chest, it was found to be well-developed, with both sides equal; the percussion note was almost tympanitic, except at the base of the right lung posteriorly, where there was comparative dullness. A few rales were to be heard scattered over the chest, and bronchial breathing in that part where the dullness existed. The superficial cardiac dullness was found to be perfectly normal; the apex beat was diffused and weak, but situated somewhere about the nipple-line in the fifth interspace, at which spot a faint presystolic thrill could just be perceived. On auscultation at the apex the first sound was remarkably short and flapping, and was not followed by any second. There was an exceedingly short and slight roughness to be heard immediately preceding the first sound, which might almost have escaped attention had not the presystolic thrill pointed out its nature. At the base there was a reduplication of the second sound; in the aortic area it was weak, in the pulmonary area it was but very little stronger. There was no tricuspid disease discoverable. The liver was found to be uniformly enlarged, but there was no pulsation or any great degree of tenderness. The dullness in the right nipple-line was six inches and a half in depth. The spleen was apparently somewhat enlarged. The urine was scanty and loaded with urates; it contained a considerable quantity of albumen. The treatment adopted was to keep the patient perfectly quiet, to supply him with a nourishing diet, more particularly Benger's peptonized beef jelly, and to administer half an ounce of the Pharmacopœial infusion of digitalis every three hours.

I need not occupy space by detailing the daily progress of the case; it will be sufficient to mention briefly the changes in the various organs implicated. The dyspnœa began to abate in the course of twenty-four hours after beginning the digitalis, and had entirely left him in three days. The sputum tinged with blood disappeared at the same time. The sweating was noted as much less by the fourth day, at which time also the liver dulness was found to be diminished. On the sixth day the size of the liver had become quite normal. At the same time that portion of the right lung which had been compressed regained its normal resonance and breath sounds. The urine was clear and free from albumen on the third day. As regards the heart, although its action continued to be irregular during the whole attack, and in fact has remained so since, the pulse became stronger in the course of two days, and with the improvement in the nutrition of the cardiac walls the sounds underwent the following modifications: On the third day the murmur at the apex, from having been genuinely presystolic in rhythm, was noted to have changed so as to occupy the whole of the ventricular pause, the second sound being still absent. It was very rough in character. The next day, the rhythm and everything else remaining the same, the roughness had changed to a loud rumble. On the fifth day the aortic second sound was to be heard at the apex for the first time, and was immediately followed by the rumbling murmur,

which, however, no longer extended quite to the beginning of the first sound, thus becoming post-diastolic in rhythm. The second sound at the aortic cartilage was noticed to be louder than before. On the sixth day a faint systolic murmur accompanying the first sound was heard just at the apex, not traceable to the axilla or back, the post-diastolic murmur remaining as before. In this condition the heart has remained up to the present time, when the patient has been compelled to resume his occupation. All the sounds are stronger; at the base the aortic sound is normal, the pulmonary sound accentuated.

Remarks.—The absence of abnormal cardiac dullness might have rendered the diagnosis obscure, if the other symptoms had not pointed so strongly to cardiac insufficiency. No doubt the enlargement of the right ventricle and left auricle is masked by an emphysematous condition of the lungs, the result of the previous attacks of bronchitis. The insidious advent of the disease, without any previous history of rheumatism, and its long existence (as shown by the clubbed ends of the fingers and toes, and by the extent of the mischief in the heart itself), without having attracted attention, hardly require comment, both of these circumstances being common in this form of valvular mischief. It is worth noting, however, that after a long period of immunity the rupture of compensation was brought about with the greatest rapidity by an attack of cold. I would draw attention to the alteration in rhythm of the obstuctive murmur under the influence of rest and digitalis. At first a true presystolic murmur, it changed so as to occupy both diastolic and presystolic periods, and later the diastolic period only. These changes were coincident with an increase in the strength of the walls of the left ventricle, as shown by the improvement of the aortic second sound, its conduction down to the apex, and by the appearance of the systolic mitral murmur. It is quite reasonable to suppose that by strengthening the ventricular walls their diastolic power will be increased in the same ratio as their systolic power; and this permits us to make use of Dr. Broadbent's hypothesis that the post-diastolic rumble may be produced by the blood being strongly drawn from the left auricle, through the narrow mitral opening, during the active dilatation of the left ventricle. This will account for the production of the diastolic or post-diastolic murmur, but will not explain the absence of the presystolic portion of the murmur at a time when other signs showed the heart to be acting strongly. It would seem that the increased power of the left ventricle to fill itself during the diastolic period resulted in a condition modifying the vibrations of the mitral valve during the presystolic period, and so rendering them inaudible. A question of great interest in mitral stenosis is the almost characteristic loud and short first sound. It has been aptly compared with the second sound in quality, and appears to owe its shortness, like the latter, to the fact that it consists of a vibration of the valves unaccompanied by muscular bruit. The absence of tone in the walls of the left ventricle particularly is to be explained by the small amount of blood which has habitually reached it in a long-standing case of mitral stenosis, like the one we are considering, and may thus account for the imperfect contraction of the muscle. As regards the loudness of the sound, sometimes so extreme that one cannot hear it without a stethoscope eight or ten inches from the chest, it is difficult to explain unless we accept Dr. Broadbent's suggestion that, "it is due to imperfect distension of the ventricular cavity, and the consequent absence of resistance at the beginning of the systole."

The Comma Bacillus.

The *Lancet*, November 29, 1884, contains the following:

We have received the following "conclusions" arrived at by Dr. E. Van Ermengen, after some researches upon the comma bacillus of Asiatic cholera, communicated to the Microscopical Society of Belgium on October 26th. They will be seen to traverse most of the points in dispute, and to accord with Dr. Koch's results.

1. In the intestinal fluids of patients attacked with cholera (eight autopsies and thirty-four examinations of stools) there exists an organism identical with the comma bacillus discovered by Koch.

2. Its curved shape, its S-shaped, and chain-like groups, due to juxtaposition, and its occasional formation of slightly wavy filaments, give an assemblage of microscopical characters which render it easily recognized from pathogenic micro-organisms hitherto known.

3. It is more or less abundant in the choleraic products according to the period of the disease and the time of examination. In two rapidly fatal (*foudroyants*) cases it occurred in the intestinal contents almost in a pure culture. In one case of short duration, where the patient had succumbed with very marked algide phenomena, there were very few comma bacilli to be found in the intestinal fluid. They disappear from the darker stools of the reaction stage.

4. It would have been very important to search for them in the dejecta of patients attacked with so-called premonitory diarrhœa, but our investigations were not brought to bear on this point.

5. In the single case of algide cholera, where microscopic examination failed to detect numerous comma bacilli, a culture of a small quantity of the intestinal contents on soiled linen in a damp chamber yielded an incalculable number of characteristic comma bacilli in twenty-four hours.

6. Microscopical examination of dejecta can suffice to establish the diagnosis of Asiatic cholera when preparations containing the different forms of comma bacilli in excess are obtained.

7. Bacterioscopic research supplies the deficiencies of microscopical examination in cases where the comma bacilli are scanty, and are even not found with certainty in the preparations. The characteristic aspect of their colonies, studied under a low power (1⁄10 diam.), renders them easy of recognition. The practical value of these culture processes on the glass slide in nutrient gelatine (10 per cent.) is well shown by our experiments. Mixtures of a very small quantity of the cultivation product with a considerable amount of putrefied blood, stagnant urine, fæcal matter, hay infusion, etc., yield preparations where the typical colonies of comma bacilli have

been detected with readiness in the midst of most varied vegetation.

8. The study of the morphological characters of the comma bacilli at different stages of development, cultivated in various media, chiefly in chicken broth and fluid serum, shows that they should be classed with true spirilla.

9. The most varying conditions of temperature and medium have not resulted in the discovery of a stage of spore formation; and their want of resistance to drying proves that they do not produce permanent germs.

10. Gelatine cultures cease to be inoculable six or seven weeks after having been sown. Agar-agar cultures still contain living organisms after eight to nine weeks.

11. The temperature most favorable to their development seems to be that of from 25° to 37° C. Below 16° (between 8° and 15°) they are still developed, but with difficulty.

12. Their phenomena of growth and multiplication are extremely active. In from two to three days they completely liquefy many cubic centimetres of coagulated serum.

13. The curved bacilli of the saliva, discovered by Miller (March, 1884), and believed by Dr. Lewis to be identical with the choleraic comma bacilli, do not develop in gelatine, 10 per cent.

14. The cultures of the organisms, to which MM. Finkler and Prior attribute the production of cholera nostras, are impure. That which I examined contains two kinds of bacilli. Their mode of vegetation and the appearance of their colonies in gelatine differ from those of the comma bacilli of Asiatic cholera. One of them gives to the cultivating medium a very characteristic greenish-blue fluorescence, which is wanting in the pure cultures of the comma bacilli.

15. Attempts at inoculation of the cultivation products have so far yielded very encouraging results in some species of animals, such as dogs, rabbits, and guinea-pigs. Three out of four guinea-pigs died in two or three days after the injection into the duodenum of one drop of a culture (fourth day) of the comma bacilli in liquid serum, after the method pursued by MM. Nicati and Rietsch, of Marseilles. The cadaveric appearances were those of cholera, and the intestinal fluids contained large numbers of comma bacilli.

16. The pathogenic action of these products of cultivation is very likely due to a zymosis, to an unstable albuminoid compound. Corpuscles of fresh human blood placed on Ranvier's heated platinum, and brought into contact with a drop of a serum-culture, present characteristic changes wholly comparable with those described by MM. Nicati and Rietsch in their observations on the blood of choleraic cases.

17. The discovery of the comma bacillus is of the greatest importance in the diagnosis of choleriform attacks of doubtful nature which occur at the commencement of epidemics, and for the resort to more effective prophylactic measures which this early diagnosis allows.

18. The employment of bacterioscopic methods in the diagnosis of cholera does not offer any great difficulty in practice, and it would be very desirable, in view of the serious threats of an invasion of Belgium by cholera, that a sufficient number of physicians employed in the sanitary services should be initiated therein with the least possible delay.

Carcinoma of the Stomach in a Child.

In the Pathological Society of London, Nov. 18, 1884, Dr. Norman Moore showed sections of the stomach taken from a girl, aged 13 years, who was brought to the hospital with extreme anæmia and slight anasarca of the face, hands, and legs. Her heart's action was very feeble, and she had a loud systolic murmur, audible at the left base. Her pulse was of very unequal beat, and a systolic thrill was to be felt over the whole cardiac area. She had no albuminuria. Besides her anæmia, her chief symptoms were repeated attacks of cardiac distress. She never vomited blood, but two days before her death, complained of pain in the abdomen, and was slightly sick once or twice. An enlargement of her spleen was felt. She died five weeks after admission.

Post-mortem—A new growth, of which sections were shown, was found at the cardiac end of the stomach, close to the œsophagus. The mass was about three inches across. Its periphery arose from the mucous membrane, and was of the same color, but its central parts were ragged, dark colored, and very tense. On section it was red, with paler stripes. The outer part of the growth was adherent to the liver, but did not penetrate it. There was a little recent peritonitis apparently due to a slight tear at the periphery of the growth. No glands and no other organs were infiltrated. There was a very old, and perhaps congenital dislocation of the right hip joint. The heart was greatly dilated. It contained several adherent, softened, ante-mortem clots, and there was an adherent thrombus in the left jugular vein. The microscopical characters of the growth were those of a carcinoma with somewhat wide trabeculæ, with extensive mucoid degeneration of the cell contents, but no degeneration of the trabeculæ, and with hemorrhages into several parts of the growth. Three distinct stages were visible in the growth. In the least degenerate, numerous cells of an epithelial type were collected in large alveoli. In another, advanced mucoid changes were observable in the epithelial cells, and in some cells the nuclei had disappeared. In the most degenerate parts, almost all the nuclei had disappeared, leaving a mass of mucoid material intersected by traces of the cell boundaries. In all three parts the fibrous trabeculæ of the carcinoma remained unaltered. The early age of the patient was a remarkable feature of the case: it was one of the earliest, if not the very earliest example of cancer of the stomach (with microscopical determination) hitherto recorded. The cancerous mass was less dense than such new growths in the gastric wall usually were, but resembled many such cases in the absence of secondary deposits. The child's paternal grandmother died of carcinoma of the descending colon at the age of 53, in 1878, and was examined post-mortem by Dr. E. D. Wallis, of Leiston, Suffolk. The growth was not examined microscopically, but there could be little doubt that it was a true carcinoma, and his case might be regarded as an example of the law of heredity that peculiarities tended to

appear at an earlier age in the progeny than that at which they occurred in the ancestor.

Rupture of the Heart.

Before the Glasgow Pathological and Clinical Society (Oct. 14, 1884), Dr. J. Lindsay Stevens exhibited three specimens of spontaneous rupture of the left ventricle of the heart.

1. The first specimen was obtained from the body of a man who had been treated in the cutaneous wards of the Western Infirmary for a somewhat generalized eczema. There had been no complaint whatever of any heart trouble, and death was sudden, while the patient was alone in the bath-room applying his ointment. The pericardium was distended with red serum, and a large clot was moulded on to the surface of the heart. A linear, ragged tear, about one inch in length, was present in the free margin of the left ventricle, about midway between the auriculoventricular septem and the apex. The branch of coronary artery going to this part of the heart wall was completely obstructed by an aneurism filled with clot, and both arteries were highly atheromatous. Fatty degeneration was only very slightly present; the muscular tissue in the neighborhood of the rupture was much softened. Dr. Stevens was still engaged investigating the histological changes in this case, but had not yet quite made up his mind as to their true nature.

2. The second case was sent to the Western Infirmary Museum by Dr. Yellowlees, of Gartnavel. It was obtained from a woman aged 70, who had been long insane, and who was in her usual health until the time of her death, which was sudden. There was a large irregular aperture of a generally oval shape, and an inch in long diameter, situated in the anterior wall of the left ventricle, close to the septum. The wall of the heart was somewhat bulged around it, and the edges of the aperture were everted. Fatty degeneration was distinctly present, but not extreme or sufficient of itself to cause rupture; and the left coronary artery, in addition to being atheromatous, was plugged by a thrombus and so rendered impervious.

3. This case was also furnished by Dr. Yellowlees, and was one of sudden death. On the external aspect of the left ventricle, near the base, there was a longitudinal aperture about $\frac{3}{4}$ of an inch in length. The internal opening was much smaller—only $\frac{1}{6}$ of an inch in diameter, and its edges were quite smooth. In all probability the rupture in this case had been due to aneurism of the heart-wall.

Night Blindness.

Before the Ophthalmological Society of the United Kingdom (Oct. 9, 1884), Mr. W. Adams Frost read notes of two cases of night blindness. The first was that of a painter, aged 34, who had had six attacks of night blindness, each coming on whilst he was painting white houses in the spring, the weather, except on two occasions, being very bright. Each attack lasted about a fortnight, and disappeared under treatment by rest, tonics, and use of eserine. Vision during the attacks was $\frac{2}{36}$, and the visual field was normal. The patient was somewhat anæmic, but there was no history of any illness. He was in receipt of good wages, and had not been underfed. He had never had any symptoms of lead-poisoning, nor had he ever been out of England. The second was that of a lamplighter, aged 19, who for six weeks had been engaged in painting the lamp-posts on country roads in excessively bright weather. After three weeks' painting, he suffered severely from pain and lachrymation. Three weeks later he suddenly found that he could not see one evening, and this inability to see in a dull light continued until his visit to the hospital two weeks later. His vision then, in ordinary daylight, was normal ($\frac{20}{20}$ and 1 J.); the visual field was normal. He presented no signs, and had had no symptoms, of lead-poisoning. He was treated with tonics and instillation of eserine, and recovered in about five weeks. A month later he had a relapse, from which he recovered in about a fortnight. Since the previous attack he had been following his ordinary occupation of lamp-lighting.

Mr. Walter H. Jessop asked Mr. Frost whether he had noticed any patches on the conjunctiva in his cases?

Mr. Frost replied in the negative, and Mr. Jessop said that, in three cases coming under his own notice lately, suffering from night blindness, patches were present in both eyes, looking like small bubbles of air, and easily scraped off. On these dry patches were numerous bacilli of uniform size; these facts had been noted by Snell and others. Two of the cases were under Mr. Nettleship's care at Moorfield's, and the third was under Mr. Jessop's care at the Paddington-Green Children's Hospital. Two were children underfed, one nearly starved, and the third case was an adult man, suffering from albuminuria. Artificial cultivations from two cases showed the same characteristics, especially as to slowness of growth. In the third case, the dry patches disappeared at the same time as the night blindness.

The Graver Fevers of Child-bed.

Dr. W. C. Neville contributes an article on this subject to the *Dublin Jour. of Med. Science*, November, 1884, which thus concludes:

1. There are a variety of puerperal fevers, but no one "puerperal fever," properly so-called.

2. Some of the less serious fevers result from local inflammations, combined with some degree of toxæmia.

3. Various exanthemata—notably scarlatina—may occur about the period of child-bed, and are then manifested in a more or less blurred form, though they can usually be recognized by specific peculiarities. Such fevers are apt to be complicated by endogenetic toxæmia, septic poisoning, or septic infection.

4. There are two chief types of puerperal toxæmia accompanied by fever—the infective and non-infective.

5. The non-infective form is the result of septic poisoning, and comprehends the greater number of sporadic and, in its uncomplicated form, more remediable cases of puerperal fever.

6. The infective form results from heterogenetic infection—septic, erysipelatous, diphtheritic, etc.—and includes the greater number of serious

child-bed fevers, especially such as assume what is usually known as the "epidemic" type in the practice of hospitals or individuals. The succession of cases is kept up by the actual transfer of the infective contagia (almost certainly consisting of pathogenic bacteria or their spores, contained in the unhealthy secretions), by hands, instruments, etc., from one patient to another. The initial case of such a series may be due to the infection of the patient with septic material derived from the juices of some corpses—especially such as are but lately dead of some malignant infective disease—from gangrenous, sloughing, erysipelatous, or diphtheritic wounds, etc.

7. There are exceptional cases in which, thugh the symptoms and progress resemble closely those of the infective fevers, no foreign source of infection can be discovered. Some of these cases may originate in usually severe traumatisms or crushing occurring during labor, followed by sloughing, etc.; others in an intensification of a pre-existing catarrhal or gonorrhœal inflammation of the genital passages; and others, again, in the local and neighboring inflammatory consequences of the retention within the uterus of decomposing portions of the placenta.

Operative Treatment in Intestinal Obstruction.

In the first Harveian Lecture (*Brit. Med. Jour.*, November 22, 1884), Mr. Thomas Bryant lays down the following rules for operative treatment:

1. Laparotomy should be undertaken as soon as the diagnosis of acute intestinal strangulation is made. There should be no delay allowed for the formation of a specific diagnosis of its cause. It should likewise be proposed in all cases of acute intussusception, and of chronic, which have failed within three, or, at the most, four days, to be releived by other treatment.

2. In all operations of laparotomy, it is to the cæcum that the surgeon should first advance, since it is from it he will obtain his best guide. If this be distended, he will at once know that the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. Adhesions or bands are, moreover, more frequently near to, or associated with, the cæcum, than with any other part of the intestinal tract. It is also in the right iliac fossa that the collapsed small intestine, in cases of acute strangulation, is usually to be found; and, with this as a starting-point, the surgeon will have less difficulty in tracing up the intestine to the seat of strangulation than if he begins at a distended coil, when it will be a matter of chance whether he travels away from or towards the special object of his search—the seat of obstruction.

3. In a laparotomy, when the strangulated coil of bowel is gangrenous, it should be brought out of the wound, and the gangrenous knuckle resected. The proximal and distal ends of the resected bowel should then be stitched to the edges of the wound, and an artificial anus established.

4. Nélaton's operation of enterotomy should be undertaken in all cases of intestinal strangulation, when laparotomy is rejected or seems inapplicable, as well es in cases of intussnsception in which the invaginated bowel cannot readily be released. It should be performed in the right groin, or, rather, right iliac fossa.

5. If laparotomy succeed, the cause which called for it is removed, and the normal action of the bowel is restored. If resorted to early, and as a rule of practice, it is probable that it would be more successful than the treatment by opium, inflation, or purgatives, which has hitherto been in vogue.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——A remarkable case of successful œsophagotomy for the removal of a foreign body (a gold tooth plate) is reported in a reprint before us, by Dr. Leroy McLean, of Troy, N. Y.

——The success which at times attends the judicious hygienic treatment of acute urania is illustrated in a paper from the *Alienist and Neurologist*, by Dr. A. Nellis, jr., of Willard, New York.

——Dr. W. O'Daniel, of Bullard's, Ga., in an article from the *State Transactions*, argues that the plaster splint is preferable to all others, "because accidents can be successfully treated with less trouble to the physician or surgeon in charge, with less risk and with a greater degree of comfort to the patient; and certainly so in preventing displacements, which, if not discovered and corrected before union, sometimes leave life-long deformities, which frequently disable patients who remain standing indices against competent and skillful surgeons, who are frequently considered by the unprofessional responsible for the ignorance or negligence of nurses and the obstinacy of patients themselves; and last, but by no means least, the patient is saved a long term of service in bed, on his back, from probably a simple fracture of the leg."

——Dr. Thos. F. Wood, of Wilmington, North Carolina, publishes a pamphlet on "The Work of Medical Progress in North Carolina." As Secretary of the State Board of Health, he speaks with full knowledge, and his report is a cheering one.

——A contribution to the study of muriate of cocaine in ophthalmic surgery comes to us from Dr. C. J. Lundy, of Detroit, Michigan.

BOOK NOTICES.

Transactions of the Medical Society of the State of Pennsylvania. Vol. xvi. Published by the Society. Philadelphia, 1884.

This is a handsome, well-printed volume of 622 pages, and its contents are every way worthy of the care with which they have been issued.

There are a large number of original papers, the result of close personal observation and heedful reasoning.

It would not be worth while to give the list of them here. We have already done more than that in our report of the meeting of the society, to which this volume refers. They cover a wide ground in both medicine and surgery, and there are few special branches but are represented by one or more articles which offer a real increment to knowledge.

Several of the articles are illustrated, and doubtless many of them will see the light in other media, where they will be more accessible to the general public.

The excellent feature of receiving reports from county societies is kept up, something over twenty counties responding to the call, and the part of the publication they furnish is by no means the least valuable. We trust that these will be fostered as much as possible, as this is one of the most potent plans of securing general interest in a State society.

The Story of My Life. By J. Marion Sims, M. D., LL. D., edited by his son, H. Marion Sims, M. D. 8vo., pp. 371. New York, D. Appleton & Co., 1884.

When the great Gœthe set about writing his autibiography he boldly and honestly called it "Truth and Fiction;" and it would be better were this title given to ninety-nine out of every hundred biographies composed by the subjects themselves. As a rule, they could not write the truth about themselves were they to try, and as a still more general rule they will not try.

Dr. Sims' autibiography is a pleasant book, reminding one in its vivid portraitures and in its strong personality of those delightful old "Memoires," which the French of the last century had such a genius for compiling. He tells the incidents of his interesting career with the zest of a romance writer, and the occurrences and conversations of his early life are set forth in a vigorous style.

The medical reader will turn with the greatest interest to chapter xiv., in which the writer describes the progress of his discovery of the operation for vesico-vaginal fistula. It is told with all his usual realism of description, and with a remarkable poetic license of the imagination. Those who are acquainted with medical history know perfectly well that Dr. Sims did not originate the operation, nor did he even introduce any important improvement in it. The silver suture, the shot fastening, the method of exposing the lesions—all these had been practiced and published before the date of his asserted discovery of them, and if he did not know of them, it was because he had not read the current literature of his profession.

We do not wish to detract an iota from any just claim of Dr. Sims', but we are equally unwilling that he or his admirers should detract from the just claims of others; and we cannot refrain from expressing our astonishment that Dr. J. N. Toner, undoubledly the most thorough medical historian of our country, in the biographical sketch which he appends to the volume, should pass over this unfounded claim in silence.

The history of this operation has been published in various quarters, and in its general introduction and popularization, Dr. Sims did a master's work, and one that cannot be too highly praised; but his claim to having originated it must be regarded as a case of self-delusion, or unconscious memory.

A Practical Treatise on the Diseases of the Ear, including a sketch of aural anatomy and physiology. By D. B. St. John Roosa, M. D., LL. D. Sixth edition. 8vo., pp. 718. New York, Wm. Wood & Co., 1884.

Among the standard works on aural diseases, the above-mentioned treatise has long held one of the highest places. It is complete, largely the direct result of the author's own studies, written with the intention of making his subject clearly comprehended, and by careful and frequent revisions, kept well up to the times.

The present edition has undergone a thorough revision, involving both many alterations and a number of additions, materially increasing its bulk, and likewise adding to the interest it will have for the advanced student and the specialist. The illustrations are numerous, and are well printed. Quite a number of them have been prepared especially for this edition from anatomical specimens in the possession of the author or his friends.

Elements of Surgical Diagnosis. By A. Pearce Gould, F. R. C. S. 18mo., cloth, pp. 584. H. C. Lea's Son & Co., Philadelphia, 1884.

This volume belongs to the series of "Manuals for Students of Medicine," which is in course of publication in London. They are, as we have said before, far superior to most such series, and the present issue is no exception to that rule. It is clearly the work of an experienced surgeon, who has his material well in his mind and can express himself tersely and clearly. No practitioner in surgery can read it without deriving great benefit from its many suggestions.

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THE BEGINNING OF 1885.

With the beginning of the New Year it is an old and a good custom to lay out one's plan of labor, and to make certain projects and determinations for one's action during the next twelve months.

What is the habit for the individual guidance may profitably be applied to the professional life. There is always a good, a better, and a best employment of one's time in his profession. It is not enough to measure this by the one standard of pecuniary gain. However necessary this may be, it is not the only nor is it the highest common measure of action. In our avocation especially, there are other and more urgent duties than that of simply putting in the time to the greatest money profit. In fact, it may be said that he who looks solely at the main chance will often miss it through the consequences of this narrowness of his visual range.

There are many things besides this which will occupy the hours of the enlightened physician. He will pursue some investigation the results of which will accrue to the benefit of his fellows; he will impart the experience he has gained to the world through some of the avenues which now offer themselves in such abundance; or he will engage actively in some of the measures which are always in discussion in medical societies, and which look toward the benefit of the profession as a body or of the public at large.

It would be well if every physician at the close of his career could point to some such purpose clearly defined and successfully prosecuted, and call it the fruit of his labors. Were this a general rule the amount achieved in the aggregate would be great, and the rate of progress would be vastly increased.

Now that the young year is beginning, with so much in it in store for all, with so much in sight that urgently asks the doing, we make these suggestions, trite ones, if you please, but ever timely ones, so long as there remains need for their adoption. They are appropriate at all periods, but particularly so when we enter upon a new epoch in our lives.

THE REPORT OF THE SURGEON-GENERAL.

The annual report of the Surgeon-General contains a number of items of wide interest.

One of these is the comparative mortality and liability to disease of the white and colored soldiers. Among the white it was 12 per 1,000 of mean strength, and among the colored it was 10 per 1,000.

It is interesting to note that not only is this the lowest death-rate yet reached among colored troops since their organization, but it is the first time that the rate has fallen lower than that for white troops; the usual average difference being 3.2 per 1,000 of mean strength, in favor of the latter class.

The admission-rate for malarial diseases which, in the aggregate, constitute 11 per cent. of all diseases and injuries reported, is 10 per 1,000 lower than for the previous year. Contrary to accepted opinion, malarial diseases have shown themselves to be more frequent among the blacks than the whites, the admission-rate for the former being 62 per 1,000 higher for this year, and 14 per 1,000 higher for the previous year. It is believed that this apparent increase can be explained by the fact that all regiments of colored troops, except one, are, and have been, serving for many years in an especially malarious region—the Indian Territory, the State of Texas, and the Southern part of Kansas, together with the States of Missouri and Arkansas, an area which, while it contains less than 20 per centum of the strength of the army, furnishes nearly 50 per centum of all cases of malarial diseases reported.

Comparative ratios for white and colored troops who have been stationed together for an irregular series of years, between 1876 and 1880, inclusive, within the region indicated, show, as a rule, a greater prevalence of malarial diseases among whites; but they also show that departures from this rule are of occasional occurrence, and are usually due to explainable causes. The average difference between the two races for malarial diseases was, during the years noted, 76 per 1,000 of mean strength in favor of the colored race.

The colored troops present a higher rate than white troops for syphilitic and other venereal diseases. On the other hand, their comparative freedom from intemperance continues to be of interest.

With regard to consumption, while there appears to have been no material difference between the two races in the rate of admission during the year, the combined rate of loss by deaths and discharges has been somewhat in favor of the white troops.

Typhoid fever was unusually prevalent during the year. It appeared principally in barracks, and could be traced to defective drainage and sewerage, bad ventilation, overcrowding, and impure drinking water. There does not seem evidence that it was conveyed from one post to another by the transfer of the soldiers.

The progress of the medical and surgical history of the war has been slow, partly owing to the long sickness and final decease of Dr. J. J. Woodward.

Brief necrological notices of the medical officers deceased during the year are appended.

TREATMENT OF CHOLERA-DIARRHŒA BY ENTERO-CLYSMA.

Prof. Arnaldo Cantani, of Naples, introduced, in 1870, the treatment of intestinal catarrh by entero-clysma, viz., by injections, carried high up in the canal. According to the nature of the disease, the character of the injected material varied. When this year the cholera ravaged in Italy (our readers will remember that the Asiatic epidemic appeared with a remarkable severity in that country), Prof. Cantani concluded to try the same mode of procedure in the prodromic stage—the diarrhœa of cholera. As he seems to have succeeded admirably, we bring in the following, a synopsis of an article which he published on the subject in the *Centrlbl. f. d. Med. Wissensch.*, November 1, 1884:

To determine the nature of the fluid to be injected C. thought of the alkaline reaction of the intestinal discharges in cholera, and of the fact, established by recent investigations, that all acids

were inimical to the existence and propagation of the comma-bacilli, which are met with in such large numbers in recent cases of Asiatic cholera. He could not employ carbolic acid, as the quantity to be used would have been dangerous to the life of the patient in case of the absorbing power of the mucous membrane of the bowels being retained. He had often succeeded in curing recent and chronic intestinal catarrh, chronic ulceration of the bowels, and infectious dysentery, with tannic acid; and he concluded, therefore, to make a trial of the same remedy in the premonitory stage of diarrhœa in cholera, especially as tannic acid is capable of preventing putrefaction, and possesses, therefore, more or less disinfecting power.

In many hundreds of cases the result of these tannic acid injections has been so favorable, that C. is convinced that their general adoption at the beginning of cholera-diarrhœa during an epidemic of cholera would lead to the total prevention of the development of the grave attacks, or at least, reduce their number to a minimum.

The following formula was employed by C.: Tepid water (which has previously been boiled 2000.0), tannic acid 5. 0—6. 0—10. 0, gum arabic 50. 0, laudanum ♏ 30 to 50. C.'s assistants preferred an infusum florum chamomillæ to water.

In some cases, where the entero-clysma could not be administered according to C.'s method (3 to 4 meters high up in the bowel), the same favorable results were obtained by the use of a common syringe, if the cases were seen at the earliest beginning of the disease. In more advanced stages the common syringe did not suffice.

Where in a family some member was suffering from cholera, any diarrhœa attacking other members of the same family were at once looked upon as cases of premonitory cholera-diarrhœa, and treated according to the method described. Generally one single application of the entero-clysma (at a temperature of 38° C.) succeeded in stopping the discharge; the characteristic cholera-diarrhœa at once ceases, and a free interval of from 8 to 12 hours follows; after each fresh discharge the procedure is repeated, and usually four to five such injections suffice to put a stop to the great loss of water, which the blood suffers, to insure a continuance of the urinary secretion, and to induce at once the febrile stage without any typhoid complications, so that the algid stage never sets in in cases thus treated.

For the purpose of determining the manner in which tannic acid acts in these cases, C. instituted a series of observations in his clinic, and these demonstrated the fact that while the remedy does not effectually kill the comma-bacilli, it completely prevents their propagation and multiplication, and deprives them of all power of locomotion during at least twenty-four hours. This fact explains the action of tannic acid in the prodromic stages of the epidemic.

While it is possible that other remedies, thus locally applied in C.'s manner, may have a still better effect, C. believes that in tannic acid, if administered as described, we at least possess a drug which makes an abortive treatment of Asiatic cholera a possibility. These statements of Prof. Cantani carry with them the more weight, as his experience at the time of the epidemic in Italy in more than 300 cases, showed in each case invariably the same favorable result, not one single case of those thus treated developing into a graver form of the disease.

Notes and Comments.

General Precautions in the Administration of Anæsthetics.

While we are frequently taught that we must be very careful in the administration of anæsthetics, yet it is well that this caution should be constantly impressed upon our memories, hence we deem it well to reproduce the conclusions with which Dr. George Eastes concludes his paper in the *Brit. Med. Jour.*, November 29, 1884. They are as follows:

1. The patient should have no meal (except in cases of extreme feebleness) for four hours beforehand, to avoid the tendency to vomiting. A little brandy or ammonia may be given with some water fifteen minutes before the operation if the patient be an adult and chloroform be selected.

2. The anæsthetist should endeavor to reassure the patient by a kind, gentle manner, which may

calm an agitated heart, and induce easy respiration.

3. No tight-fitting garment or band should be left around the chest or abdomen.

4. All artificial teeth must be removed from the mouth.

5. The anæsthetist should examine the heart-sounds and pulse before the operation. This precaution may seem superfluous, in most instances, but in a few cases may put the administrator on extra guard.

6. The patient should be placed in the recumbent posture, with the head but slightly raised. This is particularly important when chloroform or any other cardiac depressor is used.

7. The anæsthetic should be applied in the manner most suitable to the vapor used, about which I have already sufficiently spoken under the heading of each drug that I have mentioned.

8. The surgeon should not commence his procedure before the patient is fully narcotized; not alone in severe operations, for many simple procedures, such as the reduction of dislocated joints and strangulated hernia, and the diagnosing of tumors of the abdomen and pelvis, require complete muscular relaxation for their successful attainment.

9. It is a golden rule never to give more of the anæsthetic than is necessary for the production of sufficient anæsthesia for the operation that has to be performed. Since every extra degree in anæsthesia is an advance along that road whose extreme goal is death, the patient should be taken no nearer the dreaded end than is quite requisite, as all the steps passed have to be retraced. Besides, as the gap separating the patient from death becomes lessened, it may easily arise that, in extreme narcosis, one extra and apparently trivial event, which in health would be quite inoperative to cause a fatal issue, may determine the patient's career.

10. Wherefore, lastly, as the work which the anæsthetist performs depends for its successful result on such a number of nicely-balanced conditions, his whole attention, during the few minutes of his employment, should be concentrated upon the case. He must watch the respirations, the pulse, the countenance, and the general condition of the patient. He should not be observing attentively the steps of the surgeon's procedure, otherwise he may fail to notice the first sign of danger in the patient, and the life, for which he is chiefly responsible, may be jeopardized before it is recognized that it is in peril. Moreover, the anæsthetist may rely upon receiving more than full recompense for all his care in a decreased number of mischances and a welcome table of good results.

Caries of the Cricoid Cartilage.

The following remarkable case specially adapted to mislead the most experienced diagnostician is published in the *Annal. des Malad. de l'Oreille et du Larynx*, 1884, 7, and is of great interest on account of its diagnostic importance:

A dealer in wines, æt. 38, had for two months been losing flesh decidedly without his having any cough or apparently suffering from any disease, except a certain hoarseness in his voice and a pain on deglutition, which later showed itself whenever the patient swallowed solid food. Four weeks later, nightly attacks of suffocation and a daily increasing dyspnœa were added to the symptoms. Except a slight difficulty on divergence of the vocal chords, nothing abnormal could be detected; neither revealed the examination of lung and heart any morbid condition. Within one week the difficulties greatly increased, and the examination again made with the laryngoscope now revealed immobility of the chords in the median line. Tracheotomy, at once performed, procured some ease, but a rather intense pain, felt at both sides of the larynx, still persevered. About a month later, the vocal chords moved somewhat better, but had become red and slightly swollen, and the same was observed of the external arytænoid region. The general emaciation of the patient progressed in such a degree as to make a skeleton of him, and the pain on deglutition increased in severity. The sputum commenced to contain tubercular bacilli, and over the left apex crepitant rales were perceived. Six weeks later, the patient presented a sad picture; the wound made by tracheotomy assumed a malignant aspect; the lower margin of the thyroid cartilage was laid bare, being ossified and necrotic; there was complete aphonia, and the vocal chords and the aryfold were infiltrated.

The patient died, and the post mortem examination revealed the following: Both lungs were thickly sown with tubercles, and the original disease, caries of the cricoid cartilage, was discovered. It formed an ossified, rarified, and purulent mass, which penetrated into the œsophagus and had caused a thickening of the arytænoid region. It is possible that the life of the patient might have been saved, if the exact diagnosis of the condition of the cricoid could have been made at the very beginning, and the cartilage had been removed.

The Protean Character of Gout.

As of interest in connection with the remarks on this subject by Mr. Hutchinson (see Vol. 51, p. 741) we are pleased to note two corroborative cases which Dr. A. Conan Doyle reports in the *Lancet*, November 29, 1884. In these cases, the grandfather was thoroughly gouty; the father had skin affections without any other gouty symptoms, and the third generations (the cases in question) exhibited eye symptoms and nothing else. The most striking feature of these cases was that they improved rapidly under the use of colchicum and alkalies.

Removal of a Tumor from the Brain.

The *Brit. Med. Jour.*, November 29, 1884, reports that on November 25, at the Hospital for Epilepsy and Paralysis, in London, a tumor was successfully removed from the substance of the brain. The case was under the care of Dr. Hughes Bennett, who, having diagnosed an encephalic morbid growth of limited size, and localized it in the upper part of the fissure of Rolando, requested a surgeon to trephine the skull over the suspected region. This was carried out by Mr. Rickman Godlee. A mass of glioma, of the size of a walnut, was extracted from under the grey matter of the upper part of the ascending frontal convolution. Up to the present time (November 29), the patient has progressed favorably in every respect.

Retroversion of the Gravid Uterus.

Before the Harveian Society of London (October 16, 1884), Dr. Amand Routh read details of five cases of retroversion of the gravid uterus, two of which, when first seen, were complicated with resulting retention of urine; the bladder in these cases exactly simulating the objective signs of unilocular ovarian cyst. Seventy ounces of urine in the one case, and fifty ounces in the other, were drawn off. Reduction was easily effected in all the cases, without subsequent abortion occurring, and with immediate relief of the symptoms of backache, nausea, and frequent micturition. The importance of early diagnosis and treatment was insisted upon.

Dr. Champneys referred to a case recently seen by him, in which an India-rubber bag was introduced into the rectum, and distended with water under a pressure of four feet, with excellent results.

Chorea in the Aged.

While not common, yet chorea does occur in old people, and since it is likely to be mistaken for senile trembling, we deem it well to call attention to the cases which Dr. Robert Saundby reports in the *Lancet*, November 29, 1884. He reports three cases which he has observed himself, and refers to nine other cases that have been reported by different authors. Dr. Saundby considers that the symptoms are sufficiently characteristic to render the diagnosis easy, and, according to his views, when it is mistaken for senile trembling, it is because the physician does not know that chorea may occur in old people. While not sure of the pathology, yet he is inclined to believe that it is not merely a functional disease, but that there is some actual structural change, such as small hemorrhages in the corpus striatum. In regard to treatment, he has little of value to say. He has found bromide of potassium of some little use, and in one case, which recovered, sulphate of zinc was used. In all of the cases reported, the general health was very bad. For such feeble old people, cod-liver oil is one of the best remedies.

Salicylate of Sodium in Malaria.

Not long since, salicylate of sodium was highly recommended as a preventive in yellow fever. This fact induced Dr. von Kirchbaur, assistant physician of the 16th Infantry Regiment of the Prussian Army (*Allg. Med. Centr. Zeit.*, November 5, 1884,) to try the remedy in a case of intermittent fever which had baffled his skill for several months. Every possible preparation of the Peruvian bark, all its alkaloids and arsenious acid—these administered in large doses and enormous quantities — had been tried in vain. The patient was a woman, and the fever had the quotidian type. K. advised her as a last remedy to take 16 grains of the salicylate of sodium in lemon-juice about an hour or two before the expected febrile seizure. After the very first dose the attack was much milder than it had generally been; the second seizure omitted, and after the seventh dose—daily one such dose having been taken—the intermittent fever had left and not returned at the time of publication, three months later.

Several months ago we published in the Medical and Surgical Reporter a series of observations regarding the effect of salicylate of sodium, and mentioned at that time that it was a very safe remedy, more reliable than quinine as a febrifuge, almost tasteless, easily soluble in water, and never causing tinnitus aurium. We then recommended more extensive trials in malaria, and we again do so to-day.

Thallin—Another Antipyretic.

The *Medical Press*, November 26, 1884, thus refers to it:

"Dr. von Jaesch, of Vienna, has recently stumbled on still another synthetic antipyretic, which he introduced to the notice of the Society of Physicians of Vienna, on October 31st, the chemical name of which is zetrahydroparachinanizæ. The name no doubt is an excellent one for ceremony and great occasions; but recognizing that life is short, and not to be all spent in pronouncing names, he has mercifully given it the shorter one of thallin, by which it will be sufficiently well known if it proves to be worthy a name at all. He has already employed it in 86 cases of pyrexia of various kinds, viz., pneumonia, typhoid, erysipelas, measles. The fever was cut short with certainty, and without any disagreeable bye-effect, but the effect upon the course of the disease was in other respects nil.

"In doses of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ gm. the temperature fell several degrees. Of the various salts of the drug enumerated by him—sulphate, tartrate, hydrochlorate—he recommends the first-named for clinical purposes, and suggests that it may well be employed when all other antipyretics have failed."

Skim Milk in Diabetes Mellitus.

Dr. J. Lindsay Porteus does not seem to think that the treatment of diabetes mellitus with skim milk has received the attention that it deserves, and he therefore publishes a paper on the subject in the *Edinburgh Medical Journal*, December, 1884.

Skim milk diet as recommended by the late Dr. Donkin has, in his hands, proved very successful. To do good, it requires resolution and much self-denial on the part of the patient to throw aside all the good things of this life, and live on skim milk, and nothing but skim milk. At first the patient eagerly catches at the chance of relief from the excessive thirst, parched skin, and other tortures, and steadily determines to take the skim milk, but, as a rule, on the fourth or fifth day he begins to tire of it, and, as in one case under his observation, the sight of it made the patient vomit. Fortunately in some cases a little kindly encouragement helps him to overcome his dislike, and with renewal of the remedy a cure is effected. He has seen much good, but never a cure by the codeia treatment. The drowsy and languid feeling which it causes, are sources of great annoyance and depression to the patient. The sp. gr. and sugar are often decreased by it, but the latter never entirely leaves. The same remarks hold good with regard to opium.

To Render Oral Suction After Tracheotomy for Diphtheria Harmless.

In view of the fact that Dr. Rabbeth recently died in England from diphtheria contracted by sucking the tracheotomy tube, Dr. John W. Ogle writes to the *Lancet*, November 29, 1884, offering the following suggestion, which seems to have a ring of good sense about it.

He suggests that such suction would be rendered free from any risk, provided that a piece of some very thin, soft, and pliable material, such as extremely delicate cambric or silk (or so-called "grenadine" or "gossamer"*), three or four inches square, were laid over the windpipe and so adapted as to form a small pouch or sac over the orifice made therein, which should be received into the mouth of the operator before the suction was practiced. The character of the tissue or material would permit of the movements of the lips and tongue appropriate to the act of sucking; and the diphtheritic stuff would be almost as easily drawn into the sac contained in the mouth as if nothing had been interposed between the windpipe-orifice and the cavity of the operator's mouth. It would doubtless be, also, advantageous if the substance forming the sac or pouch into which the diphtheritic material would be sucked were well moistered by some suitable antiseptic liquid, such as a solution of boracic or salicylic acid, or a spirituous solution of thymol or diluted oil of eucalyptus. By such a procedure as the above described the diphtheritic films and fluids aspired into the mouth would not, in any case, come into direct contact with its lining membrane; and in this way danger to the operator would be entirely obviated.

Intra-Uterine Therapeutics.

The question of intra-uterine therapeutics, or the proper drugs to introduce into the cavity of the uterus has been a very much-discussed question. Dr. Lombe Atthill read a paper on the subject before the last meeting of the British Medical Association, and we give his conclusions:

1. Carbolic acid, in the proportion of one part of spirit to two of the acid, is the safest and most generally useful of all the agents employed.

2. Carbolic acid should always be applied by means of a probe, round the point of which a layer of cotton is rolled, the cotton being carried up to the fundus at least twice on each occasion that the applications are made, which should be on every third or fourth day, till marked improvement takes place.

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*Possibly some texture like goldbeater's skin.

3. Carbolic acid should never be injected into the uterus, except when combined with iodine, in the form known as iodized phenol.

4. In many cases, iodized phenol may with advantage be applied by means of a probe.

5. In cases in which metrorrhagia or profuse menstruation occurs, depending on an unhealthy condition of the intra-uterine mucous membrane, the cavity being dilated and the uterus enlarged, from half a drachm to a drachm of iodized phenol may be injected with great advantage.

6. In cases in which epithelioma attacks the mucous membrane of the cavity, the injection of iodized phenol promises better results than any other treatment.

7. The success likely to follow the injection of iodized phenol renders the dilatation of the uterus, the use of the curette, and the subsequent application of fuming nitric acid, less frequently necessary than has been the case hitherto.

8. The injection of iodized phenol requires to be carried out with so much care, that it should never be injected except by means of a syringe which will not contain more than one drachm.

9. The use of the fuming nitric acid should be limited, as a rule, to those cases in which dilatation has been practiced, and it should always be applied through a tube, inserted into the cervix uteri for the purpose of protecting the sides of that canal from the action of the acid.

10. The pain produced by the application of any medical agent to the intra-uterine cavity, does not bear any relation to the activity of that agent, but is due to one of two causes—either to hyperæsthesia, or to narrowness of the cervical canal, especially of the os internum.

Special Report.

REPORT ON THE USE OF MURIATE OF COCAINE.

BY DUDLEY S. REYNOLDS, M. D.,

Professor of General Pathology and Diseases of the Eye and Ear in the Hospital College of Medicine, Louisville, Ky.

Reported by ALLEN KELCH, M. D.

I received from a friend in Philadelphia, on the 20th of October, two grains of the muriate of cocaine in a letter. This I dissolved in a drachm of water, and instilled it, a drop every five minutes, into the eye of a patient with a large fleshy pterygium. The instillation was begun at 1:10 p. m. Three instillations being made, I found at 1:30 complete anæsthesia of the conjunctiva. Introduction of the speculum produced but slight discomfort. The vessels of the ptergyium had been greatly contracted, so as to diminish the suffusion which had existed before the use of the drug. I dissected up the apex of the growth, and cut it loose with scissors from its point of attachment to the side of the healthy conjunctiva; and turning it back stitched the conjunctiva together with three sutures, subsequently making incisions around the cornea on each side, and then the usual radiating incisions at right angles with these to relieve tension. All this was done without complaint on the part of the patient. He declared he felt the operation, but experienced no pain.

At 4 p. m., on the same day, Miss N., the subject of double convergent squint, was treated to one instillation into each eye. In three minutes anæsthesia was pretty well established. A second instillation was then made into the right eye, and in one minute more the operation of tenotomy was begun. Introduction of the speculum created no pain, though she said it felt uncomfortable. Seizing the conjunctiva with toothed forceps and snipping it with scissors produced no evidences of discomfort or even consciousness of the proceeding on the part of the patient. Raising the tendon with the blunt hook was painful; it was divided, however, as I thought, with less pain than usually attends the proceeding, the operation being completed in seven minutes from the time of the last instillation, and twelve minutes from the time of the first. The conjunctiva of the left eye tested by touch and finding it insensible, the speculum was introduced and the conjunctiva seized and snipped without hemorrhage. On dividing the fascia the patient complained. I applied a sponge to remove a drop or two of blood which flowed, and dropped into the wound about one minim of the solution of cocaine. In three minutes I was able to pass a probe behind the tendon without pain. On making it tense, however, the patient complained; yet the process of dividing the tendon was accomplished with less complaint than was made at the same proceeding in the fellow eye. Upon the whole, I concluded the cocaine had greatly diminished the patient's sufferings, as well as reduced the hemorrhage.

On the 23d of October a gentleman, twenty-six years of age, of full habit, and who had for a long time been the subject of occasional attacks of acute otitis media, came to see me early in the morning. One drop of the solution of cocaine was placed in the ear upon the surfaces of the drum membrane, which had already been observed to be of a straw color and bulging outward. In three minutes he announced abatement of the

pain; in four minutes he expressed himself as feeling more comfortable than he had since midnight, notwithstanding morphine, including one hypodermic injection, had been administered by the family physician in the night. I then touched the bulging membrane with the end of a probe cautiously; it brought forth no response. I then punctured it freely with the lance, allowing four or five minims of straw-colored fluid, slightly tinged with blood, to make its escape. The patient being unable to blow air through the ear, I introduced an Eustachian catheter and blew out a few shreds of lymph along with a little bloody serum. At one o'clock p. m., the patient had suffered no return of the pain. He went home, took twenty grains of quinine, and went to bed. Next morning, he called to say he felt no discomfort from the ear. Examination showed that the incised membrane had united.

November 7, Mr. B. called; he had lost the sight of the left eye thirty years ago from a wound. During the last year he had noticed the sight failing in the right. Inspection showed incipient cataract. As he was now unable to go alone in the streets, it was decided to lacerate the capsule, allowing the lens to imbibe the aqueous humor in order to hasten the maturation of the cataract for extraction. One drop of the cocaine solution was instilled at 9:30 a. m. At 9:34 the speculum was introduced, and finding the cornea anæsthetic, I passed a needle through and lacerated the capsule vertically from the margin of the dilated pupil below to the corresponding point above; withdrawing the needle, about a drop of aqueous humor escaped, and the speculum was immediately removed. When this was done, the patient asked me what I thought about his eye, and on looking around, announced that everything now looked like snow. He was quite surprised to learn that I had operated.

On the 12th of November, at 2:10 p. m., one drop of the cocaine was again instilled; at 2:10½ another, and at 2:15 anæsthesia being established the speculum was introduced; section of the cornea was completed without the patient's knowledge; seizing the iris with forceps and drawing it out through the lips of the wound, the patient exclaimed, "Be careful." I snipped it off, however, without any twitching or manifestation of pain on the patient's part. The lens quickly followed without coaxing. The speculum was then removed, the lids being closed for a few moments. I practiced the usual circular movements over the closed lids in order to press out all remains of the cortex from the peripheral portion of the capsule, and on reopening the lids no difficulty presented itself in removing what appeared to be all the remaining portion of the cortex. At 2:20 the operation had been completed, and the patient declared that the drops instilled had improved his sight, seemingly unaware that he had been operated upon. It may be proper to say that this patient was eighty-five years of age, though a man of robust health, and apparently, not more than sixty.

November 14, came a child, 7 years old, with congenital catarrh in the right eye. One drop was instilled at 10 a. m., at 10:01 another; 10:05 the patient made no objection to the introduction of the speculum. I instantly thrust a needle through the cornea, and lacerated the capsule freely, carrying the needle into the substance of the lens with a rotary motion, after the fashion of drilling. The needle and speculum were both quickly withdrawn, followed by the escape of two or three drops of aqueous humor, but no tears. The child said it didn't hurt, but felt like pulling the eye. No irritation of consequence followed, and the child, who lives sixteen miles in the country, returned home the next day.

At 11 a. m., Mr. G., a plow-grinder, called with a foreign body in the cornea of the right eye, which was now quite sensitive and suffused, the pupil being narrowly contracted, and the patient complaining of circum-orbital pain. Several ineffectual attempts had been made to remove the body.

One drop of the cocaine produced in two minutes relief to the pain; in four minutes the patient opened the eye freely; in five I separated the lids with my thumb and index finger, and with a spear-pointed needle made a triangular incision into the cornea, and turned out of the proper substance, without pain, a large grain of emery. Almost immediately after its removal, however, the patient complaining, I instilled another drop, which gave prompt relief and almost entire disappearance of the suffusion of blood in the conjunctiva. At 11:30 he left the office with dilated pupil and without pain.

November 15. Mrs. McD. has dacryo-cystitis. During the last four days the eye has been tender to the touch about the inner canthus, and as the tears constantly flow over, the patient comes now for relief. She is filled with fear lest some operation of a painful character may become necessary. At 9:40 an instillation was made. At 9:47 patient permits inspection of the eye with pressure on the globe. I now passed the point of a scissors into the inferior punctum, and dividing it freely,

passed a No. 4 Bowman's probe quite into the sac before the patient was aware of the nature of the proceeding. On attempting to enter the nasal duct, she complained, and would have me withdraw the probe, when a considerable quantity of muco-pus escaped from the enlarged punctum. Another drop of the solution was instilled at 10 a. m. The duct had been fully explored, first with a No. 4 Bowman's probe, then with a No. 6, without any sense of pain whatever. On the 16th she returned, and in five minutes after the instillation of a drop of the cocaine permitted me to pass a No. 6 probe without complaint. This was done daily until the 28th without pain, when the patient was discharged cured.

With a view to determine more exactly the extent of the effects of the cocaine, I obtained a fresh supply from Prof. Diehl, the solution being the same strength as that used before, viz., 2 gr. to the drachm of distilled water.

November 17, there came Mr. T. with a colloid cyst in the upper lid near the centre, and about the size of a marrow-fat pea. He had long had this tumor: there was no pain about the eye, but he complained so much when I everted the lid that I instilled a drop of the solution just named, as much to pacify him as to diminish his sensibility to the proceeding. Seven minutes after this instillation he permitted the eversion of the lid without complaint, whereupon I divided the free border of the lid with a Beer's knife, laying open the cyst, and with a David's spoon scraped out all the contents of the sac. He complained a little, said "it didn't hurt much," and I fancied the hemorrhage was less than usual in such operations.

Miss M., æt. 19, the subject of styes, now has one in each upper lid, attended with considerable inflammatory action, and a great deal of pain. She declines to permit surgical interference. Instilling a drop of the cocaine solution into each eye, she was greatly surprised, in five minutes, to find that she could now permit me to press upon the lids and examine the eyes to my satisfaction without creating pain. Unknown to her, I thrust a knife into one of them, and evacuated its contents. She declared it hurt, and would not permit me to open the one on the other eye. The next day, however, she returned, and after another instillation of the cocaine submitted to the opening of the remaining one.

On the same day, Mr. L., a very neurotic subject, suffering with asthenopia, was subjected to an instillation with the view to determine its effects upon the accommodation of the eye. The sense of pain and soreness in the ball disappeared in two minutes after the application: anæsthesia of the cornea and conjunctiva was established three and a half minutes later. After the lapse of five minutes, no perceptible change in the accommodation had occurred, the patient reading without pain, however, for the first time in weeks. In ten minutes the near point had receded, the patient being still able to read. At fifteen minutes, but little change; at eighteen, his hypermetropia, which had been latent at first, now became manifest; at twenty-five minutes, no change. Another instillation was made: thirty minutes, accommodation almost suspended. No longer able to read, saw $\frac{20}{LXX}$. Glasses brought his vision to $\frac{20}{XL}$, which was the best result possible.

On the 18th, he was subjected to the instillation of an 8 gr. solution of hematropia, when with glasses + $\frac{1}{18}$ he saw $\frac{20}{XX}$.

(To be continued.)

CORRESPONDENCE.

Hermaphroditism in a Hog.

EDS. MED. AND SURG. REPORTER:—

A friend had a hog that appeared to be of both sexes. I desired to be at the slaughtering, and though denied the privilege, my friend saved all the private organs except the uterus. I have not dissected them, but a mere inspection shows the testicles to be nearly perfect. Attached to them are the ovaries, with fully formed vesicles. The part answerinng for both penis and vagina was attached to pelvis in same manner as is common to the male, but instead of coming forward to the centre of the belly, emerged about three inches lower than is common for the female, and was in length about two and a half inches, very much resembling a wattle that appears in some hogs on the neck.

This hog showed a strong propensity for intercourse, an in its efforts at coitus with female hogs had ejaculations, which would be, of course, backwards. Any one desiring to see the said parts can do so, as I have them in alcohol.

J. D. F. LEVER, M. D.

Columbia, Richland county, S. C., December 12, 1884.

Substitute for Sulphate of Quinine.

EDS. MED. AND SURG. REPORTER:—

In ordinary cases in which sulphate of quinine is indicated, I am in the habit of prescribing, with satisfactory effects, the following combination of sulphate of cinchonidia, sulphate of cin-

chona, and McKesson & Robbins' powdered purified chinicdine, in the following formula:

℞. Sulphate of cinchonidia.
Sulphate of cinchona.
Powd. purified chinoidine. āā grs. xx.
Sqrup, q. s.
Mix.
Divide into 20 pills. Dose, 3 pills every 2 or 3 hours as an ordinary tonic and antiperiodic.

As a cheap prescription for chills, I use the following:

℞. Sulphate of cinchonidia,
Sulphate of cinchona,
Powd. purified chinoidine, āā grs. xx.
Powdered aloes, grs. x.
Powdered sulphate of iron, ferri sulph. exs.
Powdered capsicum, āā grs. xx.
Syrup, q. s.
Mix.
Divide into 21 pills.
Sig.—Dose, 3 pills every 3 hours.

These pills I have found to be not only efficacious in arresting the chills, but a most excellent tonic in giving tone to the general system after the chills have been arrested; and for this purpose I required my chill-patients to continue them for a month or six weeks, to prevent a relapse.

A short time ago, I had among my patients a youth of eighteen years, with moderately severe typhoid fever. It lasted its usual period; and it appeared that the following pills assisted nicely in keeping up his strength:

℞. Sulphate of cinchonidia,
Sulphate of cinchona,
Powdered purified chinoidine, āā grs. xx.
Powdered sulphate of iron, exs.
Powdered capsicum, āā grs. xx.
Syrup, q. s.
Mix.
Divide into 60 pills.
Sig.—Dose, 2 pills every 3 hours.

This is a favorite pill with me in typhoid fever, and I have always found sulphate of iron, as above combined, a fine tonic in continued fever, and when I so treat it convalescence is not nearly so protracted. J. B. Johnson, M. D.
Washington City, D. C.

News and Miscellany.

The Ideal Physician.

Professor Gairdner thus describes him:

1. He must be careful and accurate, and at the same time a keen and quick observer of nature.

2. He must be able to connect his isolated observations of fact by rapid, and at the same time trustworthy, processes of reasoning.

3. He must, in dealing with emergencies, endeavor to have always what the Greeks (and Dr. John Brown after them) called *ἀγχίνοια*—nearness of the *νοῦς*, *i. e.*, presence of mind.

4. He must, as a surgeon or accoucheur, have much deftness of manipulation—manual dexterity, as we call it; or perhaps still better, ambidexterity.

5. He must treasure in his memory, and be constantly increasing from day to day, large stores of various reading in his own and other languages, in order that not only past observations, but also the vast field of scientific progress in its relation to his art may be constantly before him, or at least freely accessible when wanted.

6. He must be able to write, at the very least, in his own language, with vigor, compactness, and lucidity.

7. He must have a soul above mere money-grubbing; must on no account degrade his profession into a trade; but must be, as far as is possible to human nature, the disinterested friend, the companion, the good genius, I had almost said, of all his patients.

8. For this reason, if for no other, he must in every case have in him the distinctive essence of what is called a gentleman; and if his practice is, or is ever to be, among what are called the upper classes, he must be a gentleman, not only in principle but in detail; not necessarily what is vulgarly and falsely often styled a fine gentleman, but a gentleman in outward manner as much as in the inner spirit.

9. He must be a man endowed with a deep sense of moral responsibility, so as to beget confidence and unfailing trust in him on the part of his fellow-men. Responsibility, therefore, to them in the first instance; but underlying that, and sustaining it as surely as the root and the stem sustain the flower—a deeper and more latent responsibility to him who is the source of all good, and, therefore, of all moral principle and moral responsibility whatever.

Syphilis in Russia.

A foreign exchange says:

The extreme prevalence of syphilis amongst the Russian peasantry has long been recognized by the faculty in the dominions of the Czar. It was asserted, a few years ago, by medical authorities practicing east of the Ural mountains, that all the inhabitants of certain Siberian villages were infected; but precise statistics, as far as syphilis alone is concerned, are not to be obtained, the district authorities massing together all cases of venereal disease in their returns of mortality and sickness. Dr. Tchistiakoff, of St. Petersburg, has recently published a valuable work on *Syphilis amongst the Peasantry;* and a contribution by a female practitioner, Dr. Sinaide Elzina, on the spread of syphilis amongst the wives and children of countrymen, appeared during the past spring in the *Vratsch*. Both these writers have personally inspected a large number of peasants. In 1881, Dr. Tchistiakoff inspected 25,050 persons, in thirty-seven villages, in the Government of Pensa, between Moscow and Samara; of these 1,184 were found to be syphilitic; 385 had condylomata; 352 gummata; in 447, the disease was latent. Dr. Elzina made similar researches in the Government of Toula, south of Moscow. Out of 3,316 children, 413 were syphilitic; and out of 2,159 women 314 had syphilis. In some villages from 32 to 52 per cent. were syphilitic. Out of all these peas-

ants found to be diseased, Tchistiakoff did not find one, and Elzina only one, case of primary sore. Notwithstanding this unfortunate condition of affairs, the general health and and strength of the peasants is said to be quite satisfactory.

Russian Universities.

The following are the figures relating to the Russian universities at the beginning of 1884:

1. St. Petersburg, 99 functionaries (of whom 48 were titular professors) and 2,052 students, the expenses amounting to 429,903 roubles.

2. Moscow, 103 functionaries (57 professors), 2,430 students, and 526,724 roubles expense.

3. Kiew, 105 functionaries (46 professors), 1,475 students, and 460,334 roubles.

4. Charcow, 89 functionaries (51 professors), 821 students, and 367,944 roubles.

5. Kasan, 109 functionaries (47 professors), 776 students, and 379,496 roubles.

6. Warsaw, 79 functionaries (45 professors), 1,003 students, and 293,106 roubles.

7. Dorpat, 65 functionaries (42 professors), 1,426 students, and 256,807 roubles.

8. Odessa, 52 functionaries (28 professors), 374 students, and 252,929 roubles.

There are also at the different universities from one to fourteen per cent. of "free auditors" who are aided or supported by bursaries and subventions. The library of the Odessa University is said to contain 92,454 volumes; that of Kasan, 103,170; Charcow, 103,704; Kiew, 145,032; Moscow, 190,440; Dorpat, 218,893, and Warsaw, 363,250.

A Great Catholic University.

The establishment of a great American Catholic university is now an assured fact. Miss Mary Caldwell, of St. Louis, has contributed $300,000 to start the fund for its endowment, and the Plenary Council, which accepted the gift with many thanks, has assurances from other wealthy Catholics in America and Europe that the $3,000,000 requisite for its complete establishment will be forthcoming. The Council appointed a committee, consisting of Archbishops Gibbons, of Baltimore; Corrigan, of New York; Williams, of Boston; Heiss, of Milwaukee; Ryan, of Philadelphia; Spalding, of Peoria, and Bishop Ireland, to have charge of the matter. Four laymen will be associated with them, one of whom will be Reuben Springer, of Cincinnati, and another Eugene Kelly, of New York. The seat of the institution has not yet been chosen, but it will be either New York, Baltimore, or Cincinnati. It is proposed that the scope of the university shall be very broad. The committee will meet very soon to decide upon the site.

Professor Tyndall on the Germ Theory of Disease.

The distribution of prizes to the successful students of the Harris Institute, Preston, was the occasion of an address by Professor Tyndall on three chief principles of modern science. The doctrine of evolution, the principle of the conservation of energy, and the germ theory of epidemic disease, were the important topics on which Professor Tyndall dwelt with all his well-known powers of oratory and exposition. To Professor Tyndall's right to discuss all these principles of science we can make not the least objection, but whether his complete acceptance of the views implied in the germ theory of disease may be regarded as a matter for congratulation or not, is possibly open to doubt. But it is hardly consonant with what is really known on the matter to assert absolutely that the germ theory is proved for all the diseases which the professor passed under review. We need only add that no new light was thrown on the question.

Artificial Impregnation.

This subject has been discussed, and has its advocates among a certain class of people. Some time ago we reported a case wherein a lawsuit was the result. We now note that the *Gazette Hebdomadaire de Médecine et de Chirurgie* reviews at length a new novel with the suggestive title of "Le Faiseur d'Hommes." The romance is nothing more nor less than a plea in favor of artificial impregnation; the *dramatis personæ* are a childless count and countess and a highly scientific physician. A certain abbé is also introduced, in order to fill out the religious side of the picture. Not to enter into the details of the subject, which are better suited for a treatise on gynæcology than for a popular novel, it suffices to say that the experiment is successful, the result being a son, who is afterward known at court as the "child of the syringe." But the most curious reading is the long and abstruse argument against artificial impregnation which the reviewer introduces into his article. We can liken it to nothing but the discourse on the seven deadly sins ascribed by Chaucer to his parson in the "Canterbury Tales." In fact, the writer's view of the subject from a medical standpoint is scarcely less fanciful than the novelist's.

The Admission of Hypothetical Questions to Experts.

In a recent case reported in the Supreme Court of Nebraska, where a physician was sued for negligence in setting a broken arm, and where the trial resulted in a vindication of his treatment of the fracture, there was an interesting argument as to the admission of hypothetical questions. The counsel for the plaintiff asked the following vague question: "A blow breaking the bone of the arm—the ulna—what tendency would that have as to dislocation at the wrist?" This question was excluded by the trial judge, and upon appeal this was held to be right. The court said that it was indefinite, and not confined to conditions like those under which the plaintiff was injured. Hypothetical questions must be so framed as to fairly reflect facts either admitted or proved by other witnesses.

Cheese Poisoning.

At the recent meeting of the Michigan State Board of Health, Dr. Baker continued his reports on this subject. Seven outbreaks within the State had been reported during the year, 190 persons having been affected in all, but none fatally.

The symptoms were very similar in all cases, consisting of pains in the stomach, muscular cramps, coldness of the extremities, and great prostration, with violent retching and purging for several hours. Specimens of the Lowell cheese had an acid reaction, and a peculiar strong odor, believed to be due to caprylic acid or caproic acid. Examined under a one-tenth inch immersion objective, the cheese was found to contain the mycelium of a mould, and to be swarming with several kinds of bacteria in active movement.

The Powers of Health Boards.

The powers of health boards in cases of infectious diseases are matters of great public importance, and while the courts will sustain such boards in any proper use of discretionary power, if they go outside of the legal limits prescribed, their acts will not receive sanction. In a recent Massachusetts case the health board finding a case of smallpox too sick to be removed, seized the house where the patient was, alleging the right to do so, practically converted it into a hospital for several weeks. This action the court declared to be beyond the statute and unwarranted.

Items.

—English statistics show that about one infant in every thousand is insusceptible to vaccination.

—In the *Brit. Med. Jour.*, November 1, 1884, Dr. Donald Macphail reports an *ascaris lumbricoides* extracted from the umbilicus of a boy.

—The Syrian College, Beyroot, has tendered to Dr. W. P. Manton, of Detroit, the chair of Gynæcology and Obstetrics in the Medical Department of that college.

—Dr. Christopher Columbus Graham, of Louisville, Kentucky, recently celebrated his *hundredth birthday* in the enjoyment of a banquet tendered to him by his neighbors.

—Mr. William McEwan has offered to give $25,000 to the Edinburgh Medical School, provided $50,000 is raised from other sources. The sum of $75,000 is needed to complete and furnish the building.

—W. P. Horton, jr., of Cleveland, O., has inserted a few drops of the four per cent. solution of muriate of cocaine into the cavity of a sensitive tooth, and a few minutes afterward he used the dental engine without pain.

—One result of the sad death of Dr. Rabbette has been the invention of several forms of apparatus for sucking secretions from the tracheal wound. One of the simplest of these is made on the principle of a dry-cup with a rubber ball.

—According to a French authority, we can cure corns by saturating the stockings at the point covering the corns in a solution of phosphorus in olive oil (one part to three hundred); wear them as usual, and in fifteen or twenty days, it is claimed, the corns will have disappeared.

—Dr. Mullenhoff recently observed that in sealing honey-cells bees add formic acid to the honey by thrusting the abdomen, with the sting protruding and a minute drop of poison adhering, into the half-closed cell. The honey taken from sealed cells is said to be much more stable than that taken from unsealed cells, and Dr. Mullenhoff attributed this to a difference in respect to its contents in formic acid, which is known to be a powerful anti-ferment.

—In the *Gazette Hebdomadaire de Médicine et de Chirurgie*, M. Vigier gives the following formula of an ointment for pityriasis versicolor:

℞.	Black soap,	100.00 grammes.
	Powdered pumice stone,	50.00 "

Black soap; the writer explains, contains a considerable amount of potash; it forms with pumice a mixture having the consistence of simple ointment.

—According to M. Boursier (*Rev. de Thérap. Médico-Chir.*, No. 15, 1884), hydrate of therpylene possesses very marked antiseptic and deodorizing properties, and can be used for dressing wounds and for painting the throat in diphtheria. The vaporized fluid has a smell of turpentine, and is said to be an efficient agent for the disinfection of rooms. It is extracted by distillation from the buds of several sorts of pine.

—In the *Centralblatt für Gynäkologie* (May 3, 1884), Dr. Roth regards globus hystericus as due to a paræsthesia of the sympathetic. And as the pellitory root has been found useful in paralysis of the tongue and pharynx, the author was led to try it in globus. He gives from ten to twenty drops of the tincture of pyrethrum four times a day. He reports six cases in which he employed this remedy with satisfactory results.

—From the *Gazette des Hopitaux* we learn that at a recent meeting of the Surgical Society of St. Petersburg, Dr. Papow communicated the results of his experience with trichlorated phenol as a local application in erysipelas. The author reached the conclusion that the drug arrests the development of, or destroys, the micro-organisms upon which the disease is supposed to depend. He advised its application in a ten per cent. solution, to be brushed over the diseased part and the adjacent skin.

—Dr. R. S. Smith, in a letter to the *British Medical Journal*, cites three cases in which he has made careful observations as to the influence of the iodoform treatment upon the *bacillus tuberculosis*. In every case there were well-marked symptoms of phthisis—copious expectoration, rapid emaciation, and pyrexia, while the physical signs of consolidation were unmistakable. The sputa contained numerous bacilli. Iodoform was administered, in doses of one grain every four hours, and gradually carried up to two, three, and five grains, respectively. As a result of this treatment, the cough and expectoration ceased, there was a notable increase in body weight, and the physical signs were greatly improved. The bacilli, which had been noticed in such numbers at first, gradually disappeared from the sputa, until only a few remained. The writer acknowledges that these were selected cases, but he feels justified, from the evidence obtained, in assuming that iodoform really exercises a germicidal action upon the micro-organisms of tuberculosis.